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ABSTRACT

In recent years a number of industrialized countries have developed projects that in one way or another associate school buildings with community facilities designed for different functions or uses. The texts brought together in the present volume concern Sweden, which acted as the host country for a symposium held in 1976 on "School and Community Building in Relation to Urban Dynamics." The papers are preceded by a brief description of the general context and trends of coordination in Sweden. Three of the papers are devoted to experiences in Goteborg, Sweden's second largest city. The first, "Policies for the Provision of Facilities in the Development of the City of Goteborg," examines the general problems of facilities planning in a big city. It is followed by a descriptive study, "Rannebergen Centrum," an example of the way in which the facilities problems of new housing estates in the periphery of a city are handled. The third paper, "Planning Process of the Coordinated Centre of Vastra Frolunda," is more methodological and describes how the lessons learned from previous experience were applied to a new project. The volume ends with an account of two recent projects in Upplands Vasby that show clearly that coordination does not necessarily have to result in large complexes but can be achieved also on a small scale in the form of dispersed neighborhood units. (Author/MLF)

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V

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PREFACE

In recent years a number of industrialised countries have developed projects which in one way or another associate school buildings with community facilities designed for different functions or uses. Thus, school and non-school activities are accommodated within the same physical setting, implying relations of inter-dependence between the agencies and institutions responsible for the various activities. The countries participating in the Programme on Educational Building (PEB) decided therefore that the scope and significance of these experiences, which seem far more important than might be inferred from their limited number, called for closer analysis and clarification.

The PEB study on Co-ordination of School and Community Facilities consequently began by examining the why's and how's of projects which aim not only at meeting the educational needs of a community but also at creating a framework within which the overall social needs of the community can be taken into account. A certain number of concrete examples of co-ordinated facilities projects, drawn from various countries, were examined and most of these have been the subject of detailed case studies which are published in four separate volumes, each devoted to a given country (England/Australia, France, Sweden and the United States).

In addition, these individual studies have served as a basis for a further analysis which aimed at identifying common problems likely to be of interest to those concerned in Member countries, and at proposing strategies for action. This second phase of the study led to the preparation of a Synthesis based on the findings of the case studies and to the organisation of a Symposium on School and Community Building in Relation to Urban Dynamics held at Skokloster, Sweden, from 27th September to 1st October, 1976. The report on the latter is published together with the Synthesis in a separate volume under the title, Building for School and Community: I. Policies and Strategies.

The texts brought together in the present volume concern Sweden which acted as the host country for the Symposium. In contrast to the cases and trends described in the earlier country volumes in this series, the present texts all illustrate a very homogeneous approach to facilities

co-ordination. Although timing and context have naturally influenced the kind of solutions adopted, these are nonetheless all characteristic of a situation where facilities co-ordination has been introduced as a general policy. The role of the education authorities in this evolution has been primordial as has the new financing procedures introduced by Parliament in 1972.

The developments in Göteborg, Sweden's second largest city, are typical of this evolution and three of the papers in this volume are devoted to experiences in this region. The first, "Policies for the Provision of Facilities in the Development of the City of Göteborg", by Sven Hansson, Head of Educational Facilities Planning in Göteborg, examines the general problems of facilities planning in a big city. It is followed by a descriptive study of a case in the Göteborg region, "Rannebergen Centrum", a characteristic example of the way in which the facilities problems of new housing estates in the periphery of a city are handled. The report on Rannebergen was prepared by a team from the Educational Facilities Planning Division composed of Sven Hansson, Jan Hellner, Gunvor Lanevik and Gunnar Trenning with illustrations provided by the architects, White AB. The third paper, "Planning Process of the Co-ordinated Centre of Västra Frölunda, written by Gunnar Trenning, then Project Manager for Västra Frölunda, is more methodological and describes how the lessons learnt from previous experiences were applied to a new project.

These papers are preceded by a brief description of the general context and trends of co-ordination in Sweden, prepared by Åke Fältheim, former Head of Educational Facilities in the National Board of Education. The volume ends with an account of two recent projects in Upplands Väsby which the participants at the Symposium had the occasion to visit. The text is a condensed, edited version of the brochure which the Municipality, the Building Society (Väsbyhem), and the architects (Brunnberg & Gillberg and Anjou AB) had prepared for the OECD Symposium. These projects illustrate current trends in the provision of community facilities and show clearly that co-ordination does not necessarily have to result in large complexes but can be achieved also on a small scale in the form of dispersed neighbourhood units.

The views expressed in these reports are those of the authorsand do not commit the OECD or the national authorities concerned.

CONTEXT AND TRENDS

by
ÅKE FÄLTHEIM

Former Head of Educational Facilities
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Stockholm

THE FIRST INTEGRATED FACILITIES

1. School facilities have for a long time been used for other community purposes as well. School gymnasiums, for instance, have been used for recreational activities when they were not required by the school. Similarly, classrooms and other teaching facilities have been used for adult education during the evenings. In recent years lunches have been served to pensioners (at cost price) after the pupils' lunch hour. All this has been possible without having to adapt the school facilities for their new functions.

2. For many years, the National Board of Education has urged local authorities planning to construct a new school building to combine it with other community facilities. Gymnasiums have often been extended to suit adult requirements or school dining halls have been designed and equipped to serve as concert halls and theatres as well. Sometimes limited additional facilities have been provided for the storage of materials for hobbies.

3. It was not until about ten years ago, however, that the idea really began to gain ground that a project which was to include a school should be planned from the very outset to cater for other community activities as well. Early in 1969 the Lövgärdet project in Göteborg on which planning had been in progress for two years, was presented to a wider circle. In December 1969, the Brickebacken project in Örebro was presented to two members of the Government, together with representatives of the National Board of Education, the National Board of Health and Welfare and other authorities. Both Lövgärdet and Brickebacken were new urban areas at the planning stage. In addition to housing, all necessary service facilities were to be provided in these areas.

ORIGIN AND AIMS OF INTEGRATED FACILITIES

4. Economic factors played an important part in the discussions about the first integrated facilities. It was assumed that floor area could be saved if the same facility could be used for two or more community functions which would otherwise have to be accommodated in two or more separate buildings. Conversely, for a given economic input more needs could be catered for in an integrated facility than in separate buildings since the various community functions would benefit from using each other's accommodation.

5. Another argument was that if more functions were assembled within a single facility, residents would be able to do more things in the same place - leave a child at the nursery school or day care centre, visit the doctor, go shopping etc. In the case of Brickebacken, Örebro, it was found that people who lived in small flats and would therefore like to use meeting rooms, for instance, to attend a study circle, would be able to do so more easily if such facilities were provided close to their homes.

6. In recent years there has been growing insistence on the integration of handicapped children in the regular school system. As a result, the education of these children has been increasingly transferred from special institutions to ordinary schools. Parallel to this integration within the school system, public child care has begun to be seen in a total context. For example, pre-school education, education in the nine-year compulsory school and care of children during their leisure hours are all aspects of public care. This makes it natural for facilities catering for these various needs to be grouped, i.e. pre-school facilities, compulsory school facilities, the special facilities needed for the education of visually, aurally, orthopaedically or mentally handicapped children, recreation facilities, libraries, churches, clubs, etc.

7. Recently, in Upplands-Väsby (see pp.159-172) school facilities have been incorporated into housing in such a way that if there is a decline in the school population it will be easy to convert these facilities into more housing.

8. The amalgamation of pre-school education and the first two grades of the junior level of compulsory school is a special form of integration practised both in Göteborg and elsewhere. (Normally, the junior level comprises grades 1 - 3 and is not divided up). This co-ordination simplifies the transition from pre-school to primary education (an educational

benefit), and immature children who have started primary school can easily be transferred to pre-school for a longer or shorter period before re-entering the junior level (a social benefit). Finally, such integration increases the amount of accommodation at the disposal of both types of school.

COMMUNITY FUNCTIONS SUITABLE FOR INTEGRATION

9. Even if ideological considerations form the starting point for an assessment of the number and type of community functions that can be co-ordinated within the same facility, practical considerations also play an important role. Present experience is yet too limited and incomplete to allow any general conclusions to be drawn as to how far co-ordination can or should go. This is a matter to be decided on a case by case basis as is the question of the best possible location of facilities in relation to one another.

10. In the past few years, there has been a fairly strong trend in public opinion in Sweden in favour of small schools at all levels of education; for psychological, educational and social reasons, large schools are alleged to have an unfavourable effect on pupils. Even if the number of pupils in an integrated facility is small, the facility itself will become larger and larger as more amenities are added. The question therefore arises whether an integrated facility, by reason of its very size, will not destroy the advantages of the small school forming part of it.

11. Seen from the school's point of view there are two, but only two, types of inverted integration. If gymnasium and sports facilities are needed for both school and non-school use, the co-ordinated and enlarged facility provided for the purpose can be located a short distance away from the school. This can be done if the enlarged facility cannot be accommodated on the school site or if the alternative location is more advantageous to other likely users. School facilities also include a dining hall. For economic and other reasons it may be appropriate for the dining and catering facilities of the school to be incorporated in a public restaurant close to the school.

12. Other sectors of the community are in favour of integration with schools although the Church is sometimes an exception to this rule (cf. the case of Västra Frölunda, page 148).

THE CENTRAL ROLE OF SCHOOLS IN THE INTEGRATION OF FACILITIES

13. Schools have been a major component of all community centres built in Sweden to date. Other community functions may or may not have been included but the nucleus has always been a school. There are at least two reasons for this.

14. Firstly, the school is a community function which concerns everybody and represents a major commitment by the municipality. School is compulsory and all local authorities are anxious to live up to their obligation to ensure that education is provided for all children up to the age of 16.

15. Secondly, there are fixed standards governing the provision of school facilities whereas the requirements related to other community facilities appear to be more elusive. The National Board of Education standards specify, according to size and type of school, the number of rooms of different kinds to be provided, the size of each room and the aggregate floor area for all rooms taken together. Within the aggregate floor area, the municipality is free to make educationally justifiable deviations from the standards when the school is being planned but the aggregate floor area may not be exceeded. Representatives of other community sectors therefore know how much floor area a school will be allotted which means that they also know from the very outset how much space will be available for other community activities. It is thus natural for the school sector to play a leading part in the planning of an integrated community centre.

16. Even when the principle is accepted that local authorities are to provide within a community centre the facilities required to meet various community needs without such facilities necessarily having to "belong" to the school, the recreation department, etc., the planners are still dependent on each community sector being able to define its accommodation requirements as precisely as the school sector. This is essential to enable planning of the use of the facilities by the different community sectors without conflicts of interest arising. For instance, extra storage space has to be provided for physical education equipment which is not used by the school.

CO-ORDINATED PLANNING

17. The English summary of a report prepared for the Swedish Council for Building Research by Sven-Erik Martinsson and Anders Hamrin, entitled "School Premises Integrated in Municipal Service Installations" is reproduced as Annex I of the present paper. This summary lists no less than fourteen fields of activity - apart from school - which can be accommodated in an integrated community centre. Needless to say, the design of such a centre with provision for all these activities calls for co-ordinated planning.

18. Experience has shown that once the idea of a co-ordinated facility has been broached in a municipality, a planning group must be set up without delay. This group should comprise representatives of each of the community functions which may be housed in the facility. During the preparatory discussions it may become clear that one or more of these functions should not be included and their representatives can then leave the group.

19. The remaining members of the planning group can divide into sub-groups to work out details. The group has to investigate the accommodation requirements of each individual sector. As mentioned earlier, school accommodation requirements are precisely defined in Sweden and have also been tested in practice for a long time. The facilities required for school purposes therefore provide a good, and on the whole, stable basis for planning activities generally. Other community sectors can use the facilities required for school purposes insofar as these facilities are sufficient and suitable. For remaining activities additional facilities will have to be provided within the community centre but the need for such facilities must be thoroughly investigated if co-ordinated planning is to function properly.

20. The planning group should also consider how the completed facility would operate, and should compile "instructions for use" for the benefit of future users of the building. Similarly, the administration of the centre should also be considered in the planning group at an early stage: who is to own and be responsible for the centre (in Sweden such centres are often owned by semi-public foundations at the municipal level which let accommodation to the school and to other community sectors); how are the capital costs and interest charges to be apportioned; how are the costs of caretaking and cleaning to be shared; how are other aspects

of administration to be organised, etc. It has been found that disagreements can easily arise unless all these points are cleared up from the very beginning. An integrated facility is more complicated to administer and operate than several separate facilities.

21. Guidance on the composition and working methods of a planning group is given in the note "Co-ordination of School and Community Facilities" by Lennart Orehag and Tord Göransson, reproduced as Annex II to the present paper.

ECONOMIES

22. When the first integrated facilities were being planned it was assumed, as already mentioned, that integration would facilitate savings through a reduction of floor area. This is intrisically correct. However, for many reasons these economies tend to be eroded.

23. There is more wear and tear on the buildings because they are used more hours per year than for example facilities reserved entirely for school use. Maintenance therefore becomes more expensive than in each separate facility used for a shorter length of time in the course of the year.

24. The greater use also increases the wear and tear on furniture and equipment, machinery and technical installations, which may therefore have to be replaced more often during the lifetime of the building than would have been the case in separate facilities. On the other hand, this can also be rated as an advantage, since it is conducive to faster modernisation.

25. Personnel requirements - and with them personnel costs - will also be greater, since the centre will be open for more hours per day and per year than would a separate facility.

26. The need for wider corridors to facilitate circulation of the larger number of users leads to an increase in both investment and running costs. Conversely, to reduce the amount of corridors compact design solutions are often adopted necessitating ventilation systems which consume a lot of energy.

RESPONSIBILITY

27. Different local authorities are responsible for different areas of community activity and for the corresponding facilities; the local education authority is responsible for the school and its facilities, the social welfare committee is responsible for nursery schools and day care centres as well as for recreation activities etc. This therefore raises the question of who should be responsible for the running of an integrated facility.

28. The system which has been found best is for a special foundation to run the centre. This is in fact the only way to ensure proper management and the efficient joint utilisation of the facilities. The foundation lets the facilities to the various municipal authorities and divides the total costs (including lighting, cleaning and caretaking) between them. A joint committee including representatives of all community sectors should be set up to deal with problems of co-ordination as and when they arise. This committee should meet at regular intervals.

DEVELOPMENT PROSPECTS

29. The integration principle appears to be less popular now than it was a few years ago. Plans for total integration, with an excessive number of community sectors housed in a single facility, are very rare today. On the other hand it is very common for a school to be integrated with pre-school, recreation or sport facilities, or with several of these facilities combined. The trend seems to be towards a large number of integrated facilities, but with integration confined to a small number of community sectors.

Annex I

SCHOOL PREMISES INTEGRATED IN MUNICIPAL SERVICE INSTALLATIONS

Summary in English prepared by the Swedish Council for Building Research of the report in Swedish prepared for them by Sven-Erik Martinsson and Anders Hamrin

School premises have for a long time been made useof to provide facilities for non-school activities. There has been a gradual increase in theefforts to co-ordinate the planning of schools and other municipal service areas, primarily in the sectors of recreation, cultural activities and welfare. This report gives an overall account of the functional requirements which should be taken into consideration in conjunction with such co-ordinated planning.

The first part of the report deals with the wishes concerning premises and the relationships between these premises which may arise in the fields of activity which, together with the school, usually form part of integrated service installations. The second part gives views on the possibilities of using school premises for other purposes, and on the alterations to the premises which may be necessary in order to ensure satisfactory function. The third part gives examples of planned and already constructed facilities.

During the 1960s, a number of State Commissions of Enquiry were instituted in order to elucidate the need for changes in, and expansion of, the provision of housing service and cultural and recreational activities. All these Enquiries - in the same way as the Enquiry of 1969 into the curriculum for the compulsory comprehensive school - stress the importance of social contacts which become possible when different activities are integrated. The views put forward in these reports have been taken into account in the first part of this report where the needs for co-ordination, and the conditions applicable to this, are discussed.

The section entitled cultural activities deals with libraries, exhibitions, music, theatre, dancing, film and study activities. The field of activity of the libraries has undergone considerable expansion over the past few decades, and is now characterised by comprehensive information activity and deep involvement in the field of general culture.

However, the resources and working facilities of the public libraries vary greatly in different parts of the country, and the establishment of branch libraries in the immediate surroundings of residential areas is necessary in order that the objectives of cultural policy may be achieved. There are many advantages in co-ordinating the activities and the location of the school and public library. However, in view of the special requirements of the libraries for location in the residential areas and special facilities in the shared building, it is necessary that decisions concerning co-ordination of the programme be made at any early stage.

In the objectives laid down for museum activity, as described in the report "Museums", mention is made of an increased allocation of resources for the information activity carried out by museums, e.g. by means of itinerant exhibitions. From the point of view of education it is of great value if some of these exhibitions can be held at schools. Accommodation for this is considerably better in the senior level schools than in the junior and intermediate level schools. Joint location of the public library and the school automatically provides favourable conditions for exhibition activity.

The report of the National Cultural Council proposes a more even spread of the work done by the music institutions on a professional basis. It is also proposed that greater efforts be devoted to small groups and different forms of music and increased collaboration between the institutions and musicians outside. There is a limited supply of premises suitable for concerts, and it is desirable that a construction programme be put in hand so that there is at least one suitable hall in each municipality. A great number of people practise music in their leisure time, often by taking part in the work of the various educational associations or youth organisations. From the point of view of these musicians and school concert activity, it would be of great value if small assembly halls suitable for chamber music concerts were to be placed in, or adjacent to, school buildings.

In recent years, the institutional school theatre activity has received valuable aid in the form of the visiting theatre. The props used for this work are limited in scope, and performances are often given

in the form of an arena theatre. The premises requirement is therefore about the same as that for concerts, i.e. a flexible assembly hall seating 100-150 people. However, in order that the same premises may be used for both music and theatre, the accoustics must be capable of variation. There is extensive amateur theatre activity both inside and outside the school. There is therefore great need of premises where shows can be put on for small audiences.

The Enquiry of 1968 on the film industry claims that the interest in all kinds of cultural activities can be enhanced by means of films. It is therefore proposed that distribution of quality films should be promoted and that State aid should be given for increased construction of premises suitable for film shows. It is proposed that these premises should seat about 100. It is also likely that the technical requirements to be satisfied by these premises can be reduced by increased use of the 16 mm format and facilities for transforming film into electronic images.

By far the greatest proportion of study activity in people's free time takes place in the form of study circles run by educational associations. Publicly owned premises, such as schools and recreational centres, are largely used for the study circle activity. The chances of using school premises are often limited by a lack of storage space, the difficulties encountered in arranging joint use of equipement, and in co-ordinating cleaning and caretaker's duties. These matters should be given special attention in the course of planning. Some study circle activity is carried out in the daytime, for instance for people on shift work and for retired people. Premises which can be co-ordinated with those for the school - preferably in the form of study centres - are required for this purpose.

The section on leisure time activities deals with athletics and exercise, recreational centres and societies of various kinds. The facilities for leisure time activities which are provided outside the dwelling vary greatly from municipality to municipality. There are also large variations in the facilities provided for different age groups. The co-ordination of premises for school and leisure time is usual. The activities have also to some extent been co-ordinated in many municipalities e.g. by the staff of recreational centres situated in, or adjacent to, a school facilities being employed to supervise the pupils' recreational activities during school hours.

The most usual form of municipal investment in the field of public leisure time activity is the provision of recreational centres. One of the principal duties of a recreational centre is to attract young people who

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do not belong to some kind of society. Other duties include the provision of hobby activity, games for young children and recreational activities for school children during school days. There are no codes of recommendations concerning the sizes and layouts of these premises, but the section gives examples of layouts for such premises and the activities carried on in these. There are great advantages to be gained from co-ordinating the recreational centre and the school. The activities can be co-ordinated and the premises utilised for both forms of activity in an efficient manner.

The section on welfare deals with matters concerning child centres, the education of handicapped children, and public health. The Child Centre Enquiry puts forward strong demands concerning close co-operation between child centres and the junior level of the comprehensive school. The Enquiry points out that, on the eve of the introduction of the compulsory nursery school, the facilities for co-operation between the nursery school and the junior level school are very different in different municipalities. It is important that the planning of new buildings for nursery schools and junior level schools should be co-ordinated, since in this way direct co-ordination of the activities will be possible. The school yard can be used jointly, as well as the premises for physical and creative activities.

It has become a clearly defined objective in recent years that close contact must be established between children with different forms of handicap and the rest of society. The principal way of achieving this is integration of their schooling in the ordinary comprehensive school. As far as this possible, the pupils should be integrated in ordinary comprehensive school classes. State grants are payable in respect of alterations to buildings and premises which are necessary in order that the education of handicapped pupils may be integrated in ordinary schools. The section gives views concerning alteration of premises.

Joint location of school and shops has in many cases resulted in disturbance for both these activities. It may also be difficult to satisfy in joint facilities the different requirements concerning parking spaces, access, expansion facilities and structural design. If it is nevertheless considered that a school and shops should be located in the same building, then great care should be taken in designing entrances, division into sections and supervision.

In order that joint use of school premises for recreational activities may be brought about and function satisfactorily it is necessary for matters concerning administration, the division of responsibility and resources, and technical measures, to be given thorough study.

The layout of the school and the design of the premises influence the chances of joint utilisation. The degree of joint utilisation must therefore, as far as possible, be decided when the programme is drawn up in order to make possible functional design of the premises and furnishings and fittings.

The type of premises in school buildings and therefore the chances of joint utilisation by recreational activities, varies considerably depending on the age group for which the school caters and on the number of pupils.

In the junior level school the range of premises is restricted to classrooms, gymnasium, dining room and the necessary ancillary accommodation. The intermediate school has the same range, augmented by handicraft rooms.

With the exception of some furniture in class 6, the dimensions of the furniture in the basic spaces in the junior and intermediate school are too small for them to be suitable for adults. Although the premises can be used for recreational activities for children, the addition of a furniture store and assistance with moving the furniture are necessary if more general use is to be possible.

The senior level schools have a large range of premises, all of which have furniture that can be used by adults. The accommodation for educational purposes is divided into departments, which means that some rooms have special equipment for a certain group of subjects such as the natural sciences, while other rooms, e.g. those for languages and mathematics, have a more universal character. The layout and equipment of most of the educational premises of the senior level school are such as to make them attractive for the organisations and associations which carry on recreational activities.

In premises which have special equipment such as the natural sciences department, the room for typing instruction and technical workshop, and also in premises where educational material is stored on open shelves, e.g. in the library and study rooms, lockers must be provided and the division of responsibility and resources between the users must be properly planned. The situation is the same with regard to premises for practical and aesthetic subjects. The activities carried on in these premises also necessitate the provision of facilities for the storage of materials and work in progress. In order to ensure that the different activities will function properly, it may also be necessary to supply additional equipment.

The chances of jointly using school premises with other activities vary depending on the level of the school. As a consequence, the practical advantages of integrating school premises in municipal service installations also vary depending on the level of the school in question.

The possibility of using school premises jointly with other activities is illustrated by examples of programmes for premises for the different levels of the comprehensive school. The additions necessary in school premises for aesthetic and practical activities, so as to make them suitable for recreational use, are described in examples of layouts.

Annex II

CO-ORDINATION OF SCHOOL AND COMMUNITY FACILITIES

(A note issued by the National Board of Education on 25th November 1975 and prepared by Lennart Orehag, then Chief Educational Officer of the Municipality of Västerås, and Tord Göransson, Planning Officer in the same Municipality)

The planning of new housing areas has undergone a gradual change from being a task for experts to becoming a matter of general public interest. Opinions differ as to what may be considered to be good urban planning both among experts and ordinary citizens. The planning of schools has constituted an important part of planning in our society.

The size of service area for schools has often had dimensioning effects for entire housing areas. In recent years demands have been voiced for more use of school premises for different purposes. One significant motive is the school's need to reinforce its outside contacts. Another motive is conditioned by economic factors.

Joint Planning

Representatives from different sectors of community life take part in the planning. Co-ordination is based on plans drawn up by the local building authority for the district in question. The following parties are likely to be involved in integrated urban planning:

a) Municipal Authorities, Committees and Boards

Local council
Building committee
Local education authority
Social welfare authority
Authority responsible for administration of nursery schools
Committee responsible for administration of parks, recreational and sports facilities
Library board
Theatre board
Committee for cultural affairs
County council public health board
County council welfare board

b) Other Organisations

Tenants associations
Religious organisations
Voluntary educational organisations
Pensioners organisations
Youth council (joint body for youth organisations)
Athletics union (joint body for athletics associations)

c) Trade and Industry

Representatives of commercial interests

Organisation of Planning Procedure

Co-ordination of the different interests must be structured in some way or other so as to give the planning process the necessary stability. One approach is to organise the planning work as a project. A project management committee for co-ordination would be appointed by the local council. The committee would be responsible to the local council, although in the course of planning the directives would be issued by the various authorities, committees and boards concerned. The specialist boards may be represented on the project management committee either by employees or official agents, e.g. the chairman or the administrative head. The project management group engages a person as "project manager".

Local council

Project management committee
Representative of building committee
Representative of central social welfare board
Representative of local education authority
Representative of the parks and recreation department
Representative of local tenants association
Representative of the local real estate office

Project manager

Group 1	Group 2	Group 3	Group 4
Building	Education	Culture	Social welfare and health

Work method

The project management committee consists of representatives of local government offices and other representatives who bear responsibility in the housing area: the implementation of planning operations needs contact with all parties affected by the project. This means regular meetings with persons representing the "outer circle". As the organisation chart shows, the project management committee can appoint working groups necessary to cover various special fields. In these working groups different representatives of personnel and parties concerned will have the opportunity of participating in the planning.

An architect will be needed at an early stage to assist in drafting the different service amenities. In some instances it may also be advisable to engage an architect specifically for the task of co-ordination, while various consultants can be given the job of actually designing the service amenities. In other cases, however, it may prove wiser to give the same architect the job of co-ordinating the work and of designing the buildings.

The project management committee will be expected to consult experts and specialists in the course of its work. It will also be expected to request programmes covering the different special fields involved. These programmes will be produced in the traditional manner. It is, for instance, the responsibility of the local education authority to define the need for school premises, its decisions being later duly ratified by the county education authority. The administrative authority responsible for nursery schools will likewise produce a draft of a local programme covering nursery school facilities, the parks and sports committee a draft covering sport and facilities for young people and so on. These programmes will subsequently be assembled by the project manager and the consulting architect on behalf of the project management committee and presented at a committee meeting. It is then the job of the committee to co-ordinate the different programmes for the following:

Schools
Nursery schools - day care centres
Youth activities
Sport and physical training, indoor swimming
Other recreational pursuits
Adult education
Library services
Religious services
Health and medical care
Social welfare and senior citizens services
General residential service for members of the community

In reporting on its work the project management committee will list the different local programmes submitted and indicate any increase for specific needs. It will be the committee's task to assess the need for different types of facilities e.g. nursery schools, playgrounds, parks, running tracks etc. (See Appendix).

Spatial standards and economic assessments

An important feature of planning is estimates; these cover spatial standards, construction costs and the estimated annual cost of premises and recreational activities.

One measure of the standards in a given zone is space needs per 1 000 inhabitants compared to the corresponding space used for these purposes

in another district of similar type. It is thus wise to compare the spatial standard of each new project with that of projects already completed. In the absence of suitable material for comparison within the municipality, comparisons may be made using similar projects in other municipalities as reference cases. In the case of the area of premises, it is, for example, possible to use the calculated net floor area per unit, in this instance per 1 000 inhabitants, as defined below. The population may be calculated as being that occuring at the point in time when the number of inhabitants in the respective suburbs reaches its peak. An example of this is given in Table 1.

Table 1
AREA OF PREMISES IN SQUARE METRES PROVIDED PER 1000 INHABITANTS
Comparison between Five Districts

A = district subject to planning
B-E = districts developed at an earlier stage

Type of Facility / District and Population	A 12 000	B 10 800	C 5 700	D 9 200	E 7 300
Senior schools	542	694	0	761	0
Junior and middle schools	731	880	1140	707	836
Nursery schools (permanent)	469	194	439	386	459
After-school supervision (additional areas)	19	30	44	60	45
Sports stadium, gymnasiums (additional areas)	90	83	0	98	0
Other indoor facilities (assembly halls, youth facilities, club rooms etc.) additional areas	158	144	193	203	274
Play hall	33	0	0	0	0
Library (incl. school library) additional areas	78	51	35	54	27
Reception	3	0	0	0	0
Joint administration	9	0	0	0	0
Indoor swimming bath	33	0	0	0	0
Nursery schools, other extra areas and covered outdoor play areas	103	0	0	0	0

Another measure of the standard in an area is the cost per capita for various municipal services compared to the cost of those services in other areas of similar type. In this context it may prove less interesting to

make comparisons using compulsory services such as schools as a basis since the local authorities have to foot part of the bill on behalf of the inhabitants of the area regardless of whether they actually use the municipal facilities situated in their own district or in an adjacent district. Comparisons would also be of doubtful value as regards nursery schools since the rules governing state subsidies for this field vary from area to area depending upon the distribution between part-time nursery school facilities, full-time nursery school facilities and the year of construction of the premises for these activities.

On the other hand, it may prove more interesting to compare entirely voluntary services by the local authorities in which only the municipality itself and its inhabitants have any real financial involvement. Comparisons should therefore be made of recreational services of various types. A certain degree of preparatory planning should be done to provide a basis for such comparisons. This will however of necessity be extremely general, meaning that even the financial estimate can only be presented in skeleton form. Personnel costs, for a given activity, for example, are dependent upon the number of hours amenities are to be accessible to the public over a given period of time, something which is decided when drawing up the annual budget.

Applying the same system as that used for calculation of the size of the premises, the population should be counted at the time when the number of inhabitants in the district reaches its peak. The cost incurred by an activity per inhabitant resident in a given area is shown in Table 2.

Table 2
ANNUAL RUNNING COSTS IN SWEDISH KRONER PER INHABITANT FOR RECREATIONAL ACTIVITIES

Comparison between Five Districts

A = the district being planned
B-E = districts planned and completed at an earlier date

Type of Facility / District and Population	A 12 000	B 10 800	C 5 700	D 9 200	E 7 300
Recreational activities	100	66	48	91	78
Library activity	58	31	14	36	11
Recreation	6	0	0	0	0
Indoor swimming baths	17	0	0	0	0
Other recreational activities	20	0	0	0	0
	201	97	62	127	89

Appendix

PROPOSAL REGARDING RESPONSIBILITY FOR THE PROVISION OF FACILITIES UNDER CO-ORDINATED PLANNING

Facilities	
Senior school	SK
Middle school	SK
Junior school	SK
Nursery school 5-6 years	BA
Recreation centre	BA
Day nursery school 0-4 years	BA
Library	BI
Assembly rooms	PF
Facilities for young people	PF
Hobby facilities	PF
Scouts facilities	PF
Study premises - club rooms	PF
Playgrounds	PF
Park games with play leader	
Adventure playground	
Outdoor sports and physical training	PF/SK
Gymnasia	PF/SK
Open-air bathing facilities	PF
Special outdoor amenities	PF
Special service	BS
Jointly run services	FO
Church premises	KY
Commercial premises	KO

Key:
- SK Local education authority
- BA Child welfare authority
- PF Parks and recreation board
- BI Library board
- LA County council
- KY Church
- KO Commercial enterprise
- BS Service to residents
- FO Administration and maintenance

POLICIES FOR THE PROVISION OF FACILITIES IN THE DEVELOPMENT OF THE CITY OF GÖTEBORG

by
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Board of Education
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URBAN DEVELOPMENT IN SWEDEN

General

1. In Sweden urbanised space is less than 1 per cent of the total area of the country, more than half of which is covered by forests, slightly more than 30 per cent by mountains, and 8 per cent by lakes. Land under cultivation represents 7 per cent of total area. Population development is characterised chiefly by a continuous but relatively slow growth, a modification of the age structure towards higher ages, and considerable mobility of the population. The present total population is approximately 8.2 million, concentrated mainly in the mid-Swedish lowlands and in the south. About 2.5 million people - 30 per cent of the total population - live in three large urbanised areas, which include the cities of Stockholm, Göteborg and Malmö. Approximately one-third of the population lives in sparsely populated areas and areas with up to 2 000 inhabitants; the rest live in urban areas with 2 000 to 140 000 inhabitants. Figure 1 gives an idea of the distribution of the population over the whole country and figure 2 shows the actual or estimated breakdown of the population between urban and sparsely populated areas.

2. The urbanisation process began later in Sweden than in the other industrialised countries of western Europe. Structural changes and the growing need for services of different kinds have brought about, from the end of the 1800s, an exodus from the countryside and from sparsely populated areas in favour of urban areas. At the same time these areas, statistically, have absorbed the whole of the population growth during the 1900s. It is interesting to note, however, that the population of the three largest cities has decreased during recent years. In Malmö and Göteborg this decrease has been going on since 1971. In Stockholm the downward trend had already begun in the 1960s and has involved more than 100 000 people.

3. One aspect of the growth of urban areas which has only recently been the object of closer study is the increasing surface required per inhabitant. An investigation into a number of urban areas shows that since the beginning of the 1900s the surface required per inhabitant has doubled or trebled in

Figure 1 AREAS WITHIN 30 KM. OF A TOWN WITH A POPULATION OF OVER 25 000

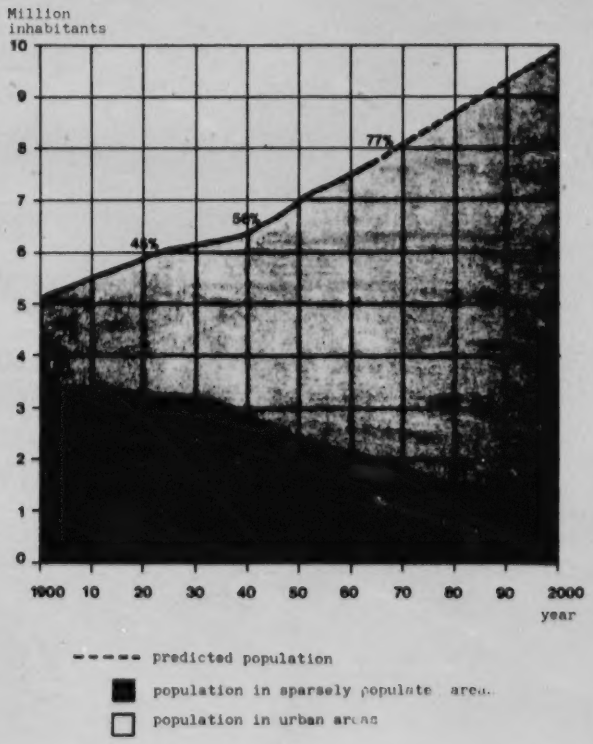


Figure 2 BREAKDOWN OF POPULATION IN SWEDEN BY URBAN AND SPARSELY POPULATED AREAS FROM THE YEAR 1900 to the year 2000

Source: Godlund, Hägerstrand och Svanström (SOU 1967:21)

the larger of them. The increase in surface per inhabitant in Swedish urban areas seems to run parallel with general economic development. Even in areas where there is no significant increase in population there is considerable spatial expansion. Even the surface needed for traffic in urban areas takes up a growing amount of land as a result of the heavy investments made or planned for both public transport systems and an increase in the capacity of the road network to serve the growing number of private cars. It is difficult at the planning stage to anticipate the surfaces needed for different functions and they must therefore be estimated with a large measure of flexibility.

4. The municipal building programmes from the 1930s onwards focused almost exclusively on solving land problems, to allow apartment block after apartment block to be put up on urban sites which up to then had been largely spared. The aim was to locate new building as centrally as possible with the result that the core of towns swelled at a pace which accelerated during the 1940s and 1950s. In the long run, however, it was no longer possible to expand larger urban areas in this way. Instead, it became necessary to build new residential areas which could function as a community with mixed housing and extended services in terms of shopping centres, municipal institutions and employment possibilities for those living in the area.

Housing

5. For several years Sweden has had the most extensive housing programme in Europe in relation to its population. During the 1940s, 50s and 60s, there was a severe housing shortage. Several circumstances contributed to the increase of demand over supply, including the splitting-up of households, the lower marriage age, the rapid urbanisation and the favourable development of incomes coupled with rent control. Great efforts were therefore made to increase housing contruction so that the shortage could be "built away". In particular during the 1960s, housing was given priority in the national economy. The Swedish Parliament thus decided in 1965 that one million new flats should be completed between 1965 and 1974. This "one million" programme has been carried out and the aim of the housing policy since 1945, namely, to "build away" the housing shortage achieved. The former shortage has been followed by a surplus of flats. Since the housing shortage ended, considerably less dwellings have been built. The reduction has been entirely in apartment blocks. Building of individual houses has, in contrast, continued to increase, and during the last few years has exceeded that of apartment blocks.

6. There are no precise instructions in Sweden for planning a housing area. Regulations give very few indications as to the environmental development of an urban area. There are, however, guidelines concerning the location, size and equipment (see Annex 1) of various service facilities and arrangements supplementing housing. The guidelines are issued by central government departments responsible for following developments, each within its own field or function. Certain private trade or branch organisations have also worked out such planning guidelines. Such guidelines as exist provide rules for each function separately and take no account of the relations with other functions or of the living environment as a whole. In terms of standards the way dwellings are incorporated into a housing area and the provision in this area of service facilities and arrangements have become a matter of the objectives which each municipality sets itself. State control of the overall environment of a housing area is exercised in connection with the adoption of town plans. Furthermore, a certain degree of state control occurs when loans and subsidies are granted for certain facilities such as schools and day nurseries. In the bigger towns the objectives of the municipal authorities have been codified in norms which, as a rule, are endorsed by the municipal council.

7. The effort made to avoid building for categories of people or for particular social groups is characteristic of housing policy in Sweden. There are, however, dwellings for specific categories, e.g. housing for students, old people and the physically handicapped. Nevertheless, an effort is now being made to reduce this kind of building as far as possible. In the new residential areas the aim is to mix various social groups and an attempt is made to achieve this through offering different types of flats and houses. The earlier housing shortage has helped to limit individual choice. A certain spontaneous differentiation according to social group can be noticed all the same. An investigation into housing segregation in Malmö, for instance, shows that the town has a quite distinct segregation pattern.

8. During the post-war period most of the housing construction concentrated on apartment blocks, which amounted to as much as two-thirds of new production. In 1965, 53 per cent of dwellings were in apartment blocks. The proportion of individual houses varies according to the degree of urbanisation, the largest proportion being in sparsely populated and in small urban areas. The proportion of individual houses in urban areas with over 2 000 inhabitants is about 25 per cent, while the corresponding figure for Stockholm is about 10 per cent and for Göteborg and Malmö about 14 per cent. There is a great demand for individual houses,

however, especially in the three large urbanised areas. New production of individual houses has also increased considerably during the last few years, and terraced houses have become more commonplace. During the 1960s public reaction resulted in the stagnation of the building of high-rise apartment blocks. This may well have been brought about by the criticism voiced against such blocks in the public debate on environmental problems. The trend has been reinforced and the development has since led to a marked return to the lower type of housing and single-storey dwellings. It was a question of high or low during the high-rise blocks debate. A subsequent debate was concerned with dense or spaced-out urban development. There are quite a few advocates of denser urban construction, which facilitates the provision of services and communications, and also fosters a feeling for the town which many people miss in the functionalistic "open" way of building.

The Role of the Municipality

9. In 1974 a law on measures for improving the provision of housing made it compulsory for municipalities to draw up a housing programme. The programmes are five-yearly and are reviewed once a year. The main object is to achieve production planning based on an assessment both of the development of housing demand during the planning period and of actual production possibilities. The housing construction required is based on assumptions of economic development, population size and the structure of households. In this connection state regional planning provides guidance to the municipalities for their assessments.

10. Public investment has increased greatly in recent years: this can largely be accounted for by some of the most profound changes in post-war society. The mobility of the population has led to many more houses being built, as well as to the provision of municipal and social services as a supplement to housing. Increased motor traffic has called for the building of more roads and re-modelling of town centres. The increased child population and heavier stakes in education have made it necessary to build new schools. The investments which are the responsibility of the municipalities have been heavily strained. Despite the quick growth of the public sector, it has not been possible to satisfy the demand for services in all their forms.

THE GROWTH OF GÖTEBORG

Description

11. Göteborg is the second largest city in Sweden, with a population of approximately 445 000. Its position on the west coast has made it the country's most important trading and shipping town with extensive and internationally renowned export industries. Göteborg is also the centre of a densely populated region, with approximately 690 000 inhabitants at present, and this figure is expected to increase to 750 000 by 1990. The population growth must be seen partly against the background of the large increase in the surface area of Göteborg. This is due to the incorporation of nearby areas, which resulted in a 20-fold increase in the surface area of the municipality in this century, giving a present total of 445 km2. Göteborg's administrative district and the growth of the built-up area at various times can be seen from figures 3, 4 and 5 which also illustrate the rapid growth of the city during the 1900s.

12. At the beginning of the 1970s the population increase came to a standstill however. The influx of people from the rest of the country and from abroad fell off significantly whilst there was still quite a considerable exodus especially to the neighbouring municipalities. The present Göteborg reached its highest population peak yet in 1970, with 467 000 inhabitants. Since then numbers have decreased each year to reach the present 445 000. A further fall in population however is predicted.

13. Both within the municipality and the region there is considerable mobility. Altogether nearly 100 000 people move house each year. The majority, approximately 70 000, go to another residence within the municipality while the rest move mostly to the nieghbouring municipalities. The distribution of the population by age in Göteborg has become more and more unfavourable since a large number of those moving out are families with children. The number of inhabitants of the 0-19 age group has fallen while the age groups around 25 and 50 and over have increased.

Figure 3. GÖTEBORG'S ADMINISTRATIVE DISTRICT AND GROWTH OF THE BUILT-UP AREA AT VARIOUS TIMES

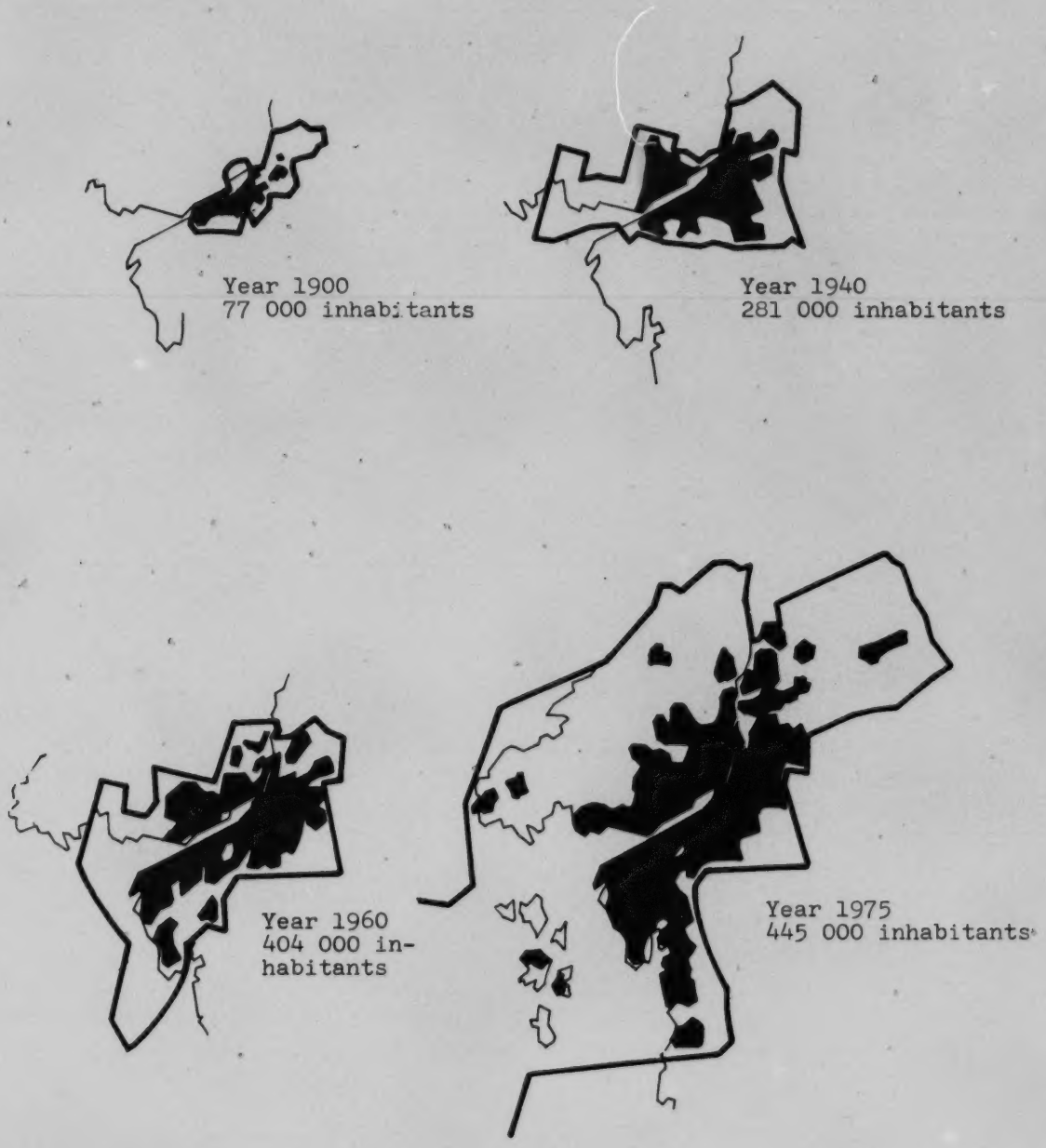


Figure 4 INCORPORATION OF NEIGHBOURING MUNICIPALITIES 1960 - 1974

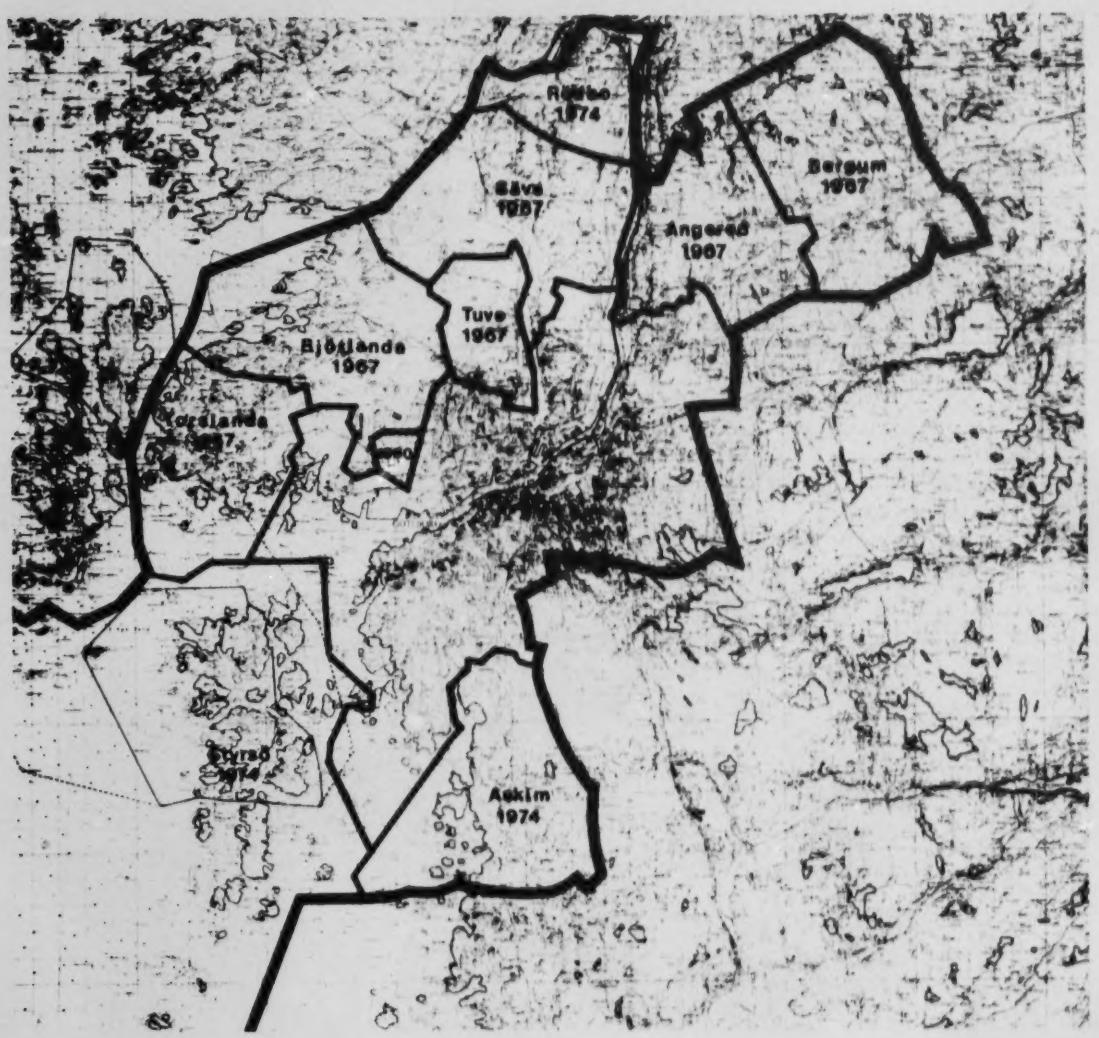


Figure 5 THE REGION OF GÖTEBORG

14. During practically the whole of the post-war period there was a great housing shortage. In the 1950s about 4 000 dwellings were built each year and the number increased successively to over 9 000 a year by the end of the 60s. Since the beginning of the population decline, around 1970, housing construction has decreased and today only 2 000 dwellings are commenced each year. Despite this, there is a surplus of flats in apartment blocks. During recent years building has mainly been concentrated on the production of individual houses. To a large extent, residential accommodation is still being built concentrically around the original inner city which remains the commercial centre and the heart of the city. The larger industries are, however, concentrated chiefly on a strip alongside the river Göta Älv.

15. The economy of Göteborg follows roughly the same pattern of development as is found in other large urban areas in industrialised countries. The service sector increases while industry stagnates. The strong industrial element in its economy is characteristic of Göteborg. Industry is dominated by a few branches and companies. Approximately one-third of all the inhabitants are employed in the manufacturing industry, dominated by heavy machinery. In addition, about one-fourth work in the public sector. Other important branches of economic life are commerce and shipping. The working population of Göteborg is about 240 000. The places of work lie mostly along the waterways: Mölndalsån, Säveån and Göta Älv. Latterly, other areas such as Högsbo industrial area and Västra Hisingen have been added. The largest place of work within the municipality and region is the inner city, where approximately 65 000 people work. The inner city is also the centre of the region, with specialised shops and head offices of various companies. Most of the local and central government administrations are to be found in the inner city. In the various districts of the municipality there are centres of a more local character, with municipal and commercial services in the form of shops, post office, library, national insurance offices, etc. Lundby Centrum, with approximately 700 people employed, and Frölunda Torg, with about 1 200, are examples of centres in such districts.

16. Göteborg's public transport system consists of a combined tram-and-bus network. The main network connects the outlying districts with the inner city. Furthermore, there are connecting bus lines at a number of stations as well as express buses and buses transporting people to and from the main industries. Despite a quite well developed public transport system, journeys by car are the predominant form of transport, especially for journeys of a service or recreation nature. For travelling to and from work both means of transport are used to about the same extent.

The need for transport has grown as a result of the spread of housing in the region. During the last 10-year period the average distance between home and place of work has increased by more than 50 per cent.

17. The need for co-operation between the municipalities in the region has led to the establishment of the Association of Municipalities of the Göteborg region. Economic use of the region's land and other natural resources has led to co-operation in economic matters, housing and the protection of the environment. Increasing demands for improved environmental quality have brought about co-operation in respect of, for example, water supply, provision of drainage and the disposal of rubbish. Since the region constitutes a joint residential and working area where the inhabitants can, to a large extent, choose where they live irrespective of place of work, there is also need for co-operation where communications are concerned. A large number of the region's almost 300 000 places of work are in the central districts. To achieve a more even distribution and to offer companies access to sites with various qualities for the establishment and relocation of factories, co-operation between the municipalities is necessary. Many young families with children have moved to the neighbouring municipalities because a great number of individual houses have been built there. The amount and distribution of housing construction in the region has become of the utmost importance for the development of each municipality. Agreements as to the nature of the housing to be provided are reached within the Association of Municipalities. Many of those who have moved to the neighbouring municipalities work in Göteborg. Increased commuting has led to greater need for co-ordination in matters of regional transport.

18. With the growth of Göteborg the population in the inner city has thinned out. The reason for this is probably people's desire for modern housing, higher standards as regards space, and an improved living environment. The people living in the older residential areas in the inner city - which in some cases have become slums - are mostly elderly. In recent years, however, young people, too, have taken an interest in these areas and have moved there. The oldest and most dilapidated housing areas are scheduled to be demolished and replaced by new buildings; the better ones will be renovated and modernised. Maintenance of the older dwellings has been neglected pending urban renewal, since demolition was considered more economic. The dwellings in the older districts had to be kept, however, until the housing shortage ended. Such renovation of dwellings as has been carried out, in some of these districts, has been well received by the public. It has been praised in the press and in

public debate. There has been hardly any criticism of the modernisation of older housing, even though the material standards are not as high as in new buildings. The costs, however, and therefore the rents, have become quite high - almost as high as those in new accommodation.

19. The other form of urban renewal, where whole housing areas are demolished and new housing built according to a newly-adopted town plan, however, has been severely criticised in connection with evacuation and demolition. First to criticise were special protest groups. Later, those living in the district concerned became involved in an effort to preserve as far as possible the original construction. The Architectural School at Chalmers Technical University in Göteborg carried out a study in one district (Haga). The study shows that most of the inhabitants wished to preserve as much of their old environments as possible and would rather, if necessary, do without some of the amenities of newer housing. The town planning authorities have also been influenced by public opinion and are now renovating older housing areas to a greater extent than previously, instead of demolishing and building new ones.

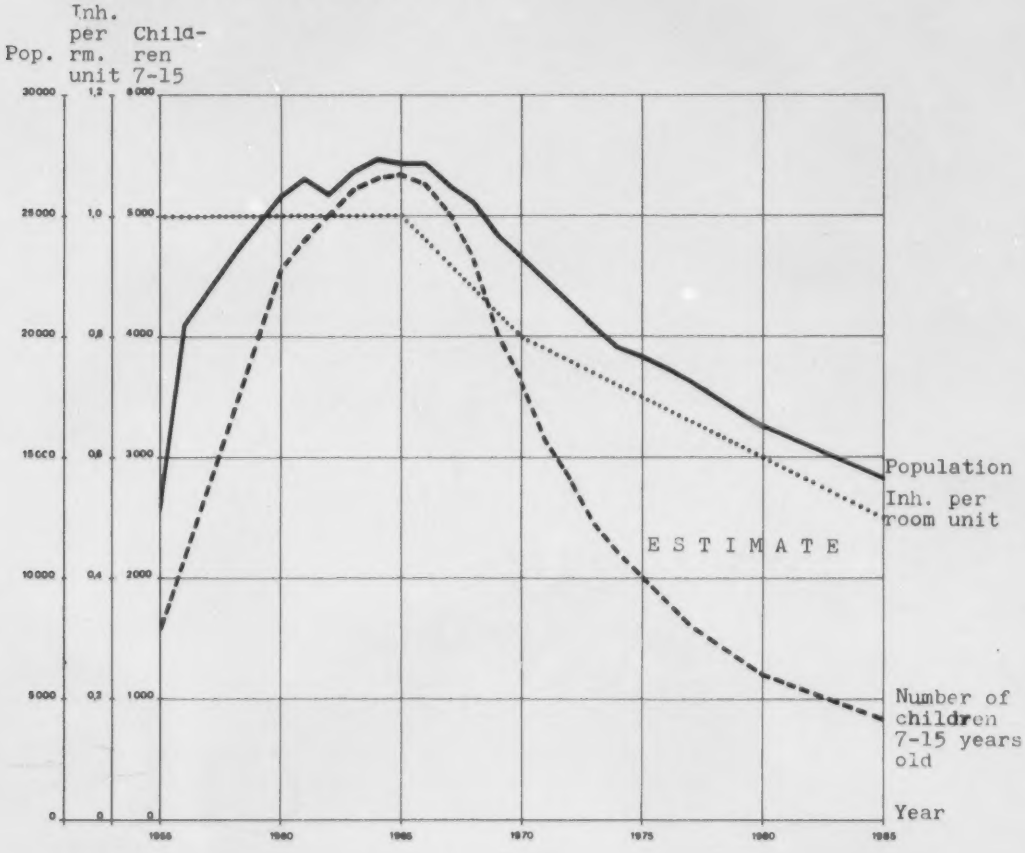
20. Those responsible in the municipality are very keen on keeping population and residential dwellings in the central districts of the city. At the end of 1971, therefore, the municipal council appointed a committee for urban renewal to submit proposals for a programme as well as directives for an urban renewal scheme in Göteborg. According to the Committee's proposals, all flats in Göteborg without modern conveniences (approximately 40 000) are to be modernised in the next ten years. However, it is not only the flats it is hoped to improve. Transport conditions, parking places, playgrounds, parks, etc., are in many cases unsatisfactory. The opportunities for getting together in indoor premises or out-of-doors are small or inexistent. Even these conditions have been examined by the urban renewal committee which states its points of view and makes suggestions for measures to be taken. When it comes to choosing the form of renewal, the Committee states that renewal by renovation is to be preferred if there are no strong reasons against it. This means that the present construction should be preserved as far as possible. The stock in really bad repair should be dealt with first. With regard to the rest of the programme, see Annex 2.

New Residential Districts

21. During the post-war period Göteborg has, in principle, been extended along the same pattern as other big Swedish cities. Suburbs with relatively large populations according to Swedish standards have grown up

very quickly outside the old town districts. Examples are Kortedala-Bergsjön in the north-east, Västra Frölunda-Tynnered in the west, and Biskopsgården at Hisingen. These residential districts were completed during the years 1952-72. For various reasons, economic ones amongst them, it has been considered necessary to complete the whole of such a district in a relatively short time. During this time 10 000 - 30 000 persons were able to move in. On account of the housing shortage those who were first in the housing queue were the first to be accommodated. The majority of families were of child-bearing age. The number of births during the first few years in, for example, Kortedala and Bergsjön, was more than 30 per thousand, while the city average was 14-17 per thousand. As can be seen from Figure 6, the density of children in "the district", was considerable over a period of 15 to 20 years. In some years it was double the average for the rest of the town and there was often an accumulation of social problems in these residential districts.

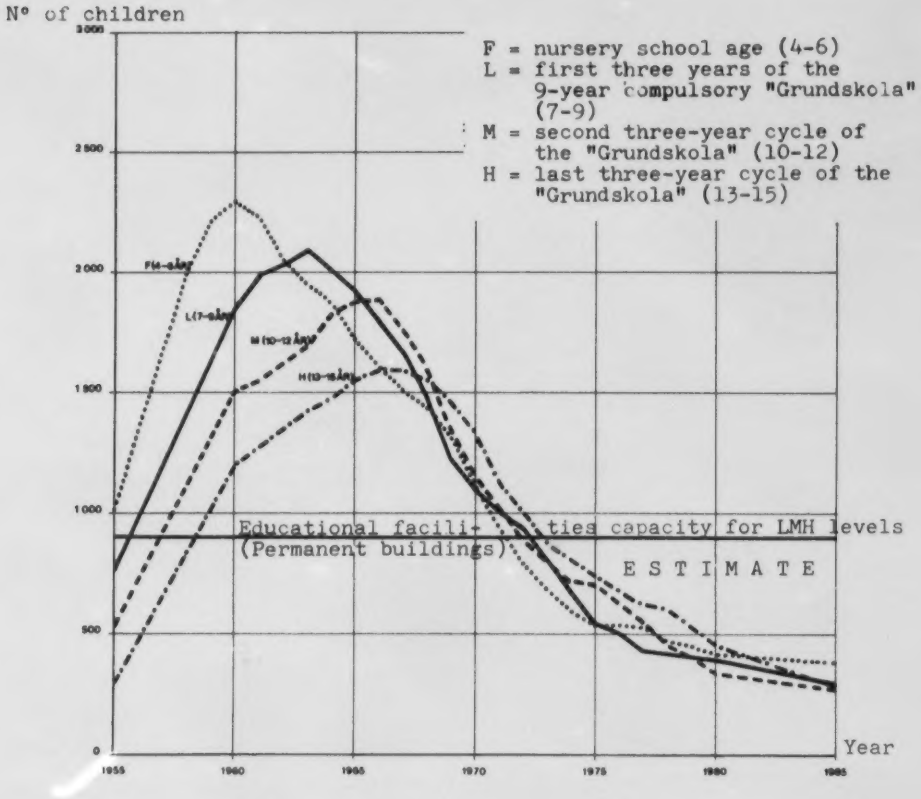
Figure 6 THE DISTRICT OF KORTEDALA, GÖTEBORG, CONSTRUCTED BETWEEN 1952 AND 1957. POPULATION, DENSITY OF HABITATION, CHILDREN OF COMPULSORY SCHOOL AGE



22. The service facilities needed within the social sector for e.g. recreation and culture and for athletics and physical training activities were very few during the most difficult period, and at the beginning often non-existent. Service facilities were indicated in the town plans according to the rules applicable at the time of planning (see Annex 3) but the town plans are not, in this respect, "mandatory" and the timing for the provision of the various facilities is therefore dependent on the economic possibilities and goodwill of the municipality. Since schooling is compulsory, however, the school must provide educational facilities also for peak loads. This problem was solved partly with permanent buildings, partly with provisional accommodation of various kinds.

23. In the light of the conditions referred to the situation and dynamics may be illustrated as follows. As long as none of the service facilities mentioned above exist the new districts with the characteristics described

Figure 7 THE DISTRICT OF KORTEDALA, GÖTEBORG, CONSTRUCTED BETWEEN 1952 AND 1957. NUMBER OF CHILDREN 1955-75 ESTIMATED NUMBERS 1976-85


N° of children
F = nursery school age (4-6)
L = first three years of the 9-year compulsory "Grundskola" (7-9)
M = second three-year cycle of the "Grundskola" (10-12)
H = last three-year cycle of the "Grundskola" (13-15)
Educational facilities capacity for LMH levels (Permanent buildings)
E S T I M A T E
Year
1955
1960
1965
1970
1975
1980
1985

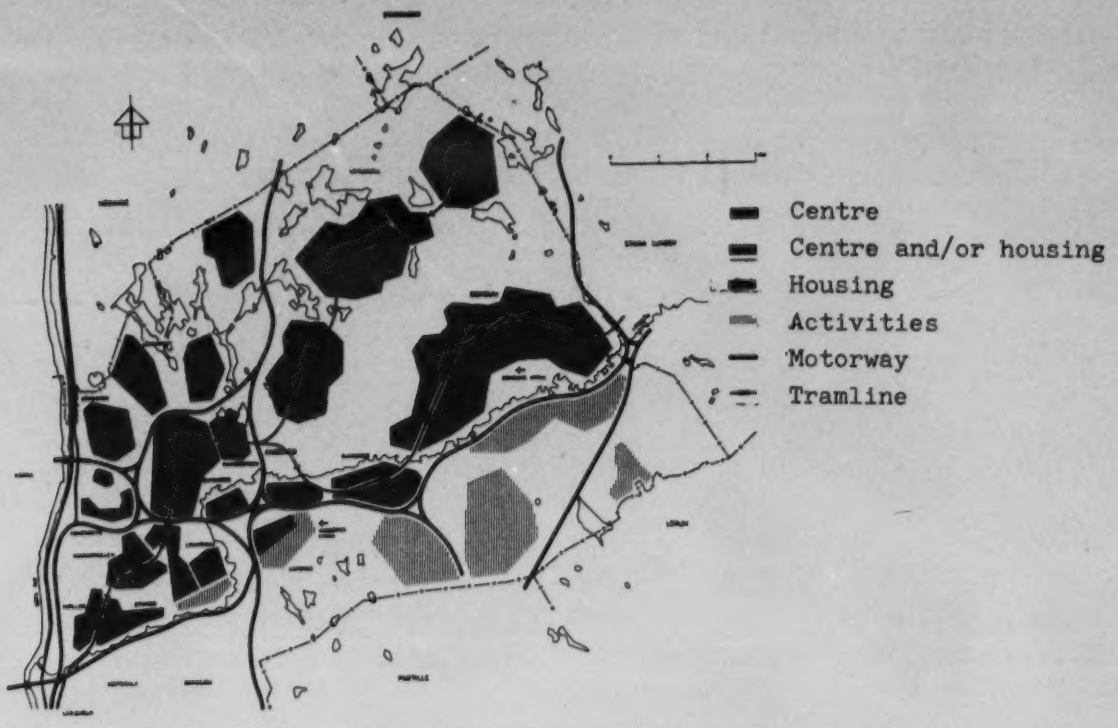
are subjected to heavy demands and severe strain on account of the large number of children and adolescents. The age groups in these districts come in waves, the first being that of nursery school children. In Kortedala these children were in the majority at the end of the 50s and beginning of the 60s. This wave was followed by one of children attending the first three years of the Swedish 9-year compulsory school, the "Grundskola", followed in turn by the wave of children in the second three-year cycle. The wave of children in the last three years of the "Grundskola" (13-15 year olds) reached its peak during the latter part of the 60s (see Figure 7). It is to be noted afterwards that these waves of large age groups of children caused very hard wear and tear on the district. Moreover, it also gradually entailed an accumulation of youth problems which would certainly have been fewer if sufficient resources had been provided earlier, or if the population had had a more balanced age distribution from the start.

Angered-Bergum

24. Angered-Bergum is Göteborg's latest big development area. As early as the beginning of the 1960s it became obvious that the town would soon have no more land on which to build. If it was to continue to provide the same proportion of housing construction in the region as previously, the area of the town would have to be expanded. This problem was solved by the incorporation in 1967 of the three Hisingen municipalities: Säve, Tuve and Torslanda, plus Angered-Bergum. At Hisingen, housing construction of any importance was held up for a long time by two airfields. The town therefore turned its attention in the first place towards Angered-Bergum as an expansion area. The district lies to the north-east of the town, 8-20 km from the centre, and covers a total surface of 95 km2. The terrain is very varied: its main characteristics are the east-west glen around Lärjeån, with numerous deep-cut ravines, and the wooded hilly parts north and south of the river. The mountainous part in the north, Vättlefjäll, is the largest, and with its natural beauty and its many lakes is especially suitable for walks and rambles, with opportunities for bathing, fishing, etc.

25. Even before the incorporation, the town bought large pieces of land and at the time of the fusion in 1967 had obtained almost 80 per cent of the land in Angered and somewhat more than 40 per cent of that in Bergum. Work on mapping and planning the area began already in the autumn of 1962, and in January 1964 a preliminary proposal for a general master plan was presented. As can be seen from the sketch plan (Figure 8) most of the residential construction is located along a tramline which starts from the

Figure 8 DIAGRAMMATIC PRESENTATION OF SKETCH TO PHYSICAL MASTER PLAN FOR THE ANGERED-BERGUM AREA



inner city and at the centre of Angered branches off into a northern and a southern line. In the final master plan, presented in 1968, the area is scheduled to have approximately 65 000 dwellings and, when fully built-up to accommodate a population of approximately 150 000. Of the dwellings planned, 20 per cent are to be individual houses and 80 per cent apartment blocks. These, together with their supplementary service facilities have been grouped in residential districts which, in most cases, are within walking distance of the tram stop. The districts which do not lie near the tramline are served by bus lines. Because of site conditions, the districts vary in size from approximately 2 500 to 5 000 dwellings. On average a district comprises about 4 000 housing units with a population which, in the years following occupation, is expected to reach 11 000, and after 20 years to be between 7 000 and 8 000.

26. In the light of the experience gained in the building-up of earlier districts, great care was taken when planning the new districts' service facilities. Amongst other things, the municipality, in the autumn of 1964, commissioned the consultancy firm GAKO AB, to investigate the possibilities of creating a leisure centre in Angered. To this end a special working group was set up under the chairmanship of the full-time City

Councillor Bengt Hedlund and with representatives from the municipal authorities and committees concerned. In the working group Mr. Roland Jerneryd, Director of Sports was responsible for calling the meetings, and within GAKO Architect Ingegerd Ågren was in charge of the study. On the basis of a first preliminary report, the need for leisure facilities was considered in relation to the need for other community facilities as a supplement to housing. It was then agreed to extend the term leisure centre to cover both the facilities in Angered's main centre and those dispersed in the housing districts and functioning as neighbourhood centres for leisure activities. The results of the study were presented in a report which aimed at defining the direction that leisure activities could take and their distribution and at indicating the possibilities that the then prevailing conditions offered for creating something worthy to be called a leisure centre. The study proposed three types of leisure centre: "the small unit", "the medium-sized unit" and "the large unit" (see Annex 4). These were to be linked to school planning, the idea being that, with the school facilities as a basis, both school and leisure would be given better resources. In addition, joint use of facilities and other resources would result in savings, so that the provision of services could be financed more easily. Furthermore, these facilities would be built at the same time as those of the school, thus ensuring that the provision of services would not lag behind.

27. After having been submitted to the authorities and committees concerned for their consideration, the study was discussed in the Municipal Council in 1968, where it was decided to set up a planning group with representatives from the Board of Education, the Library Service, the Sports Department and the Central Social Service. This planning group, together with the other administrations concerned,was to co-ordinate the planning of facilities and the objectives of leisure activities in the main according to the guidelines contained in the records of the Municipal Council and in the investigations accompanying these, such as "Angered's leisure centre", etc. The planning group which was formed following the decision of the Municipal Council consists of heads of planning or similar from the administrations concerned and has, since its inception in 1968, dealt with the co-ordination of facilities provision for education, culture and leisure both in Angered and in other parts of the municipality. These facilities have been called "integrated centres" or "cultural centres".

28. A question which has been thoroughly discussed, both in the planning group and with the urban planners, is how a cultural centre should be located in relation to the commercial centre of a district. Certain

activities, such as the library and the leisure centre need to be near the shopping centre, while the school, for example, wants a location separate from shops and close to a park or green area with its opportunities for games and sports. After discussions with trade representatives it has been agreed that the "Grundskola" (the 9-year compulsory comprehensive school) should, where possible, be clearly separated from the shops. It has thus been stated that the school should, in the first instance, be co-ordinated with activities which enrich and supplement each other. The school should therefore preferably incorporate or be linked with library, nursery school, leisure, games and sports facilities, etc. In the town plan, the school should be given a location safe from traffic and, where possible, be connected with a park with playgrounds.

29. In the town plan the school ought to be clearly separated from commercial activities. These often also have other requirements as regards location, for example concerning car traffic and parking places. Furthermore, shopping centres normally imply high density building on relatively small sites, i.e. a form of planning which goes against the demand of the school for space in the town plan. As regards the latter it is important for the school to be located close to a park or green area. Apart from the economic advantages gained from co-ordinating the school's and the residential area's games and sports grounds, the park also allows space for such provisional facilities as may be required by the school. As shown earlier in connection with Kortedala (Figure 7) the years following occupation of a new residential area often imply a peak in terms of numbers of children. This peak normally cannot be accommodated in permanent school buildings. Close to the school, usually in relation to a park or green area, land is therefore reserved for provisional school facilities in the form of section-built mobile pavilions which can be moved from one place to another within the municipality as needs arise at different schools.

30. The question of linking various activities to the school is in turn dependent upon the scale of population needed to sustain various activities. Even the schools are, in themselves, examples of activities which require different population scales under different conditions. Thus different scales apply for each of the three-year cycles of the "Grundskola" as well as for the upper secondary school, the "Gymnasium" (16-19 year olds). The planning method thus consists first in making an inventory of the functions to be provided for according to current town planning rules, then in determining the optimal population scale for each

function, and, finally, in analying the plan in question to decide on the best geographical location for a co-ordination of facilities between the school and other services as described above. (See also Annexes 1-3). The development of Angered-Bergum has not been as extensive as originally planned. Housing construction started in 1966 and so far approximately 15 000 dwellings have been built in five districts, and the present population is about 45 000. If the development of the area has not proceeded more quickly it is because, as mentioned earlier, the housing shortage has been "built away" and the population of Göteborg has decreased since 1971. The earlier serious housing shortage has also been followed by a large surplus in dwellings and as a result by a greatly increasing demand on the part of the public for services in residential areas. The municipality has consequently decided to increase the provision of such services considerably in districts previously under-provided, and a particular effort is to be made in districts with empty flats to make them more attractive. Two integrated centres have so far been completed in Angered, in the Districts of Lövgärdet and Rannebergen. Others are being planned in the Klareberg district at Hisingen, and in connection with the "Gymnasium" schools to be built in the centres of Västra Frölunda and Angered.

The Link between Residence and Place of Work

31. As has been mentioned earlier, residence and place of work have been far apart, especially in the larger towns. This has often meant long, tiring journeys and implied a heavy and costly burden on the transport system. This applies to both private and public transport. The lack of employment opportunities in the residential areas has also had a negative effect to the extent that a large part of the adult population leaves the area in the daytime and that children and adolescents do not come into contact with economic life in the same way as they would if the jobs were located in the neighbourhood. Residential areas, because of their lack of jobs have become known as "dormitories". In recent years, however, great efforts have been made by the municipal authorities to situate the places of work in or near the residential areas. When this has been possible, great advantages have been noted both by employers and employees. Relocation of the places of work is, however, a time-consuming and complicated measure.

32. Municipal services can also provide considerable additional employments in a residential area. Conscious efforts are therefore now being

made to spread to various residential areas these services which of old were located more centrally. Besides day nurseries, nursery schools, the "Grundskola", libraries, etc., which are naturally considered as part of a district, upper secondary education is now also being moved from the inner city to the districts in the outskirts. This also applies to socio-medical institutions, such as homes for the elderly, medical centres and nursing homes, and, to some extent, municipal administrations. As an example it can be mentioned that when the master plan for Angered-Bergum was drawn up one of the assumptions was that employment possibilities were to be created within the area for 75 per cent of its working population.

DEVELOPMENT OF THE DISTRICT OF RANNEBERGEN

General Description

33. Rannebergen is the latest district developed in Angered. It was planned during 1968-70 and a first construction phase, comprising 1 600 flats in apartment blocks, covered the period 1971-76. In the phases to follow, 400 individual houses will be built in direct communication with the part-district now completed. Once it is fully built-up the district will accommodate about 5 300 people, of whom approximately 4 000 will be in apartment blocks.

34. The part of the district now completed is situated on a hill, one and a half kilometres north-east of the future centre of Angered and comprises about 35 hectares. The apartment blocks are seven or eight storeys high, situated around a green area measuring approximately 300 x 400 metres. Motor vehicle traffic is confined to a ring road outside the area with parking places between the road and the apartment blocks. A 15-metre wide green belt next to the buildings ensures protection against noise from the parking places. All service traffic thus reaches the blocks from the outside. Pedestrian pathways in the form of tunnels make it possible to get to the surrounding countryside without any contact with traffic. In the green area next to the apartment blocks there is an "activity belt" with community facilities such as day nurseries, cottages for leisure activities, youth clubs, self-service laundry facilities and playgrounds for small children. The rest of the green area or "leisure park" constitutes an activity area for both children and adults. Besides playgrounds, there are tennis courts, football pitches, athletic tracks, a lit-up running-track, a flood-lit sledge- and ski-run, mini-golf, outdoor dance floor, etc. In addition, in the southern part of the area there is a combined nursery and lower primary school for 180 children aged 5 to 9. In the northern part, communicating directly with the future individual housing area, is a service centre offering a great number of activities. The Centrum contains a leisure centre, a swimming pool and sports hall co-ordinated with a "Grundskola" for 400 children aged 9 to 13. Education, sports and leisure have thus been combined in

one unit for cultural and physical training activities. The Centrum complex also comprises a church, shops and post office. (For further details, see the case study report on Rannebergen Centrum, pages 73-134 of the present volume).

General Services

35. As can be seen from the above brief description, the Rannebergen district has a very high standard of services, higher than any other residential area in Göteborg. There are several reasons for this. As mentioned earlier, GAKO AB had completed its study on "Angered's leisure centre" and a planning group had subsequently been formed to handle coordination of facilities for education, culture and leisure. This group started its work in 1968, i.e. at the same time as the town planning of the Rannebergen district began. The group started by collecting information on needs from the municipal administrations concerned. The various administrations estimated their needs for various facilities on the basis of the population scale for each unit (the large unit, the medium-sized unit and the small unit). The data thus compiled concerned size of facility, investment costs, operational and staff costs, floor area of facilities, site needs, number of parking places, hours of use, wishes as regards location within the town plan, etc. An analysis of the material was then made within the planning group and data was presented showing economic implications and the possibilities that existed for coordinating facilities between the various sectors of activity. Furthermore, calculations were made on the basis of the data compiled from the various administrations as to the types of facilities that could be considered at various population scales. Finally, the content of municipal services was defined for a model district with a population of about 10 000 (4 000 dwellings) to serve as a basis for the dimensioning and planning of services in the various housing districts in the Angered area.

36. The planning group made a first presentation of the results of its work to the Councillors concerned as well as to the Bureau of the various Boards in February 1970. This report showed that to meet the combined needs of the various administrations the investment costs would amount to about 10 000 to 11 000 SW.Kr. per dwelling over and above the State subsidies to be granted for the school facilities. These costs correspond to about 10 per cent of the total building costs for the district. It was surprising to see that the cost per dwelling was only 1 000 Sw.Kr. more than that for housing districts built earlier and where the level of services was considerably lower. The study thus showed that

co-ordination could result in important savings as compared with the provision in districts built earlier or alternatively a higher level of services for the same cost. The local politicians who attended the presentation by the planning group stated that they were in favour of co-ordination and of an increase in services in new housing districts, but the level of services was not specified on this occasion. Instead, each department was asked, within its own field of activity and for each individual housing district, to submit proposals for a programme of services. Since the preparation of the town plan or physical master plan for Rannebergen ran parallel to the work of the planning group the results of the latter could be directly applied in this district.

Why a High Level of Services in Rannebergen ?

37. It was probably not co-ordination as such nor the ensuing savings that was the main reason for the provision of the high level of general services in Rannebergen. The fact that at the time of developing Rannebergen the housing market in Göteborg was beginning to be saturated was undoubtedly more important. For this reason and because of the long distance to the inner city (about 15 km.) several politicians expressed the fear that the final result would be another dormitory town, lacking services and engendering boredom. To illustrate this, it should be mentioned that when the town plan was discussed in the Housing Board two members formally expressed their reservations about the proposed master plan. They stated in particular:

> "The increasingly intensive environmental debate in which the main criticism concerns lack of services and boredom in dormitories provides sufficient reasons for believing that Rannebergen may well run the risk of encountering considerable problems in the future. Its isolated position cannot be compensated by the view offered by its position on a hill. There is every reason to believe that the district will be considered by the public as sub-standard, and hence people will resent moving there.
>
> "In the light of the views expressed earlier in the Board and those now put forward, it is our opinion that the proposed development of Rannebergen entails economic and environmental dangers such as to justify fully a rejection of the town plan submitted."

Differing opinions were also expressed in the Municipal Council when the plan was submitted to it for consideration and two members demanded its rejection.

38. Following the critical viewpoints expressed in the course of the proceedings leading to the adoption of the plan, it was natural that when it was being implemented measures were taken to avoid the negative effects feared. In the course of the proceedings the Board of Construction stressed in particular that the question of services had been given special attention in the elaboration of the plan for the very reason that Rannebergen would have a relatively isolated position during a transitional period. The fear of lack of services and boredom in a dormitory town was not unjustified according to the town planning office, since negligence in the development of services had become an almost normal characteristic of the development of all new housing districts. This time, however, the fears were believed to be exaggerated. Those in charge of developing the master plan in their presentation of it drew specific attention to the integrated Centrum and the "activity belt" in the green area. It was further emphasised that the administrations and building firms concerned were unanimous about the desirability of constructing the service facilities in Rannebergen at the same time as the dwellings. Thus the town planning office stressed that there was every reason to believe that the question of services would in fact be resolved in a more satisfactory way in Rannebergen than was normally the case in the new districts on the outskirts of the city.

39. As mentioned earlier, the housing market was beginning to be saturated at the time Rannebergen was constructed and consequently the demand for dwellings far away from the inner city had decreased. It was therefore natural that the building enterprise responsible for developing Rannebergen, the municipally-owned Göteborg Building Society, was extremely eager to obtain the best possible servicing of the district in order to make it as attractive as possible. The Building Society therefore assumed a threefold role in the Rannebergen project - as promoter, constructor and manager.

Conclusion

40. Retrospectively it can be noted that the effort made to provide a high level of general services in Rannebergen has had good results. The flats have been let as soon as completed despite the fact that a great number of empty flats were available in other new housing districts. The Municipal Council has also recently decided to expand general services in housing districts with empty flats in order to make them more attractive.

Annex 1

RESIDENTIAL NEIGHBOURHOOD

Guidelines for the Planning of Residential Areas
Issued by the State Planning Department

The guidelines are based upon experience and good solutions. They provide information which can serve as a reference for municipalities judging the validity of various demands concerning the living environment. The norms they provide constitute an attempt to strike a balance between the needs of different groups of residents and the possibilities which, according to experience, exist in meeting these under favourable conditions when planning land use. Special local conditions and conflicts arising between different demands as regards standards usually imply that priorities must be laid down, in which event the norms have to be left aside in the case of certain aspects.

The guidelines provide indications for the judgment of the quality of the living environment which will be part of the county authorities' examination of town plans and building programmes. They are therefore not applicable to the general suitability test which as from 1st January, 1973 must also apply to building in sparsely populated areas.

The guidelines concern services and facilities or premises for activities by residents which ought to be within walking distance of the home. What is within walking distance - the neighbourhood - is extremely important for the quality of the living environment and decisive for those who spend the greater part of their day within this limited area. Access to the first six years of the "Grunskola", the various forms of nursery school, facilities for residents' leisure activities, shops for everyday needs and facilities for certain other services are of fundamental importance. The same applies to free spaces for play, physical exercise and recreation. It is also important that the areas around dwellings where people chiefly walk and which is the main play area for children are planned so as to satisfy the demands for safety from traffic and the desire for being undisturbed by noise.

FREE SPACE FOR PLAY AND LEISURE ACTIVITIES

Access to Free Space

Housing programmes should take advantage of the possibilities offered by the site for recreational activities and should, within walking distance of the residence, comprise a sufficient number of free spaces to satisfy the needs of residents for play and leisure activities.

An available free or open space within 50 metres of the entrance and covering 100 m2 per 100 m2 of floor area is acceptable.

Play Facilities

Besides facilities for which guidelines are given in SBN, playgrounds and a ball-pitch should be provided within walking distance.

Playgrounds of about 2 000 m2 and a ball-pitch of 1 000 m2 within a walking distance of 300 metres are acceptable.

Facilities for Physical Training and Recreation

Within walking distance of the residence land should be reserved for outdoor physical training and recreation activities.

A walking distance of 500 metres to such an outdoor physical training and recreation area is acceptable.

GRUNDSKOLA

Access to School

A school should be provided within walking distance of the residence and it should be so situated as to allow easy and - from the point of view of traffic - safe access.

A walking distance of less than 500 metres from the residence to a Grundskola (the first six years of schooling) is acceptable provided the route does not cross - at the same level - a street with heavy traffic.

Size of School Sites

Schools should have access to sufficiently large and well-situated areas for play, recreation and sports.

A school site corresponding to 1 000 m2 per class when fully built-up is acceptable. This figure does not include the sports grounds, ball-pitch and parking places that need to be available to the school.

NURSERY SCHOOL

Access to Nursery School

Day-nurseries and part-time pre-primary education groups ("play school") should be within walking distance of the residence and a public transport stop.

A walking distance of less than 300 metres between the residence and the day-nursery or nursery school is acceptable provided the route does not cross - at the same level - a street with heavy traffic.

Size of Nursery School Sites

Land should be reserved to meet the maximum need estimated for the development of nursery education.

Sites for permanent and temporary nursery schools should comprise sufficiently large areas for play and outdoor activities.

When the nursery school is located on a separate site, a site area of 80 m2 per place is acceptable.

FACILITIES FOR LEISURE ACTIVITIES

Location and Size

In a housing area residents should have access to facilities for leisure activities within walking distance of home. Some of these facilities should be located close to the residence.

Authorisation to build leisure facilities within a walking distance of 500 metres from the residence shall be accepted if they cover 3 m2 per 100 m2 of housing floor area, of which 2 m2 per 100 m2 of housing floor area should be distributed among and easily accessible from groups of housing blocks not exceeding a total of 10 000 m2 of housing floor area.

DISTRIBUTION OF GOODS AND SERVICES

Access to Shops for Everyday Needs

There should be a shop within walking distance of home for everyday needs.

The walking distance from the residence to the shop is acceptable if it does not exceed 500 metres.

Size of Shops

Shops for everyday needs within walking distance of the residence should be dimensioned to cater for a large variety of foodstuffs.

Authorisation to build a food shop should be given if it covers at least 400 m2 of floor area.

Access to Other Services of a Commercial Nature

Within walking distance of the residence and close to a public transport stop, land should be reserved for various kinds of dispatch services, repair services and specialised shops.

Design Considerations in Relation to Facilities for Distribution of Goods and Services

The site reserved for the distribution of goods and services are to be so dimensioned as to include buildings, extension possibilities, reception of goods, parking-places for clients' bicycles and cars. The need for easy access both on foot, by public transport and by car should be met.

TRAFFIC

Elaboration of Traffic Networks

In elaborating the traffic network for a housing area consideration must be given to adapting the network both to the function of the area and to the demands for a satisfactory living environment, and to providing good conditions for communication. Such a network should thus :

- allow organisation of the housing in functional sets with good internal connections, undisturbed by traffic and with a suitable

population scale and adequate space;
- be so designed as to render the neighbourhood free from disturbances in terms of noise, lighting and air pollution;
- be adapted to the built environment, topography, vegetation and landscape;
- allow easy access to and unhindered passage of public and private transport, with special attention to pedestrian and cycle traffic;
- offer safety by avoiding conflicting traffic;
- provide easy recognition, e.g. by posting;
- give pleasure through a harmonious layout and offer people variety when on the move;
- provide ease of movement, with special attention to the needs of handicapped persons.

Geometric Design of Streets

Guidelines for the geometric design of streets have been drawn up by the Road Construction Board and the Association of Municipalities (Rigu 33). Design solutions which allow the standards outlined in these guidelines to be achieved are acceptable.

Parking and Points of Call

Within a housing area there should be access to :

i) points of call for getting into and out of vehicles or for loading and unloading;
ii) parking places for visitors' cars and for residents' cars being used several times a week (nearby parking places).

Points of call and parking places should be easily accessible from the house entrances without neglecting the demands for safety from traffic and for non-disturbance by noise. Special attention should be paid to the needs of handicapped persons for easy access to points of call and parking places.

CLIMATE

Wind

Housing areas should be designed and located so that the air currents round the buildings do not cause unpleasantness when passing through

entrances to buildings or when playing or being out-of-doors nearby.

Sun

Housing areas should be designed and located so that free spaces for play and out-of-doors activities are acceptably sunny.

EMISSIONS

Traffic Noise

Housing areas should be designed and located so that the noise from the road traffic does not constitute a nuisance in the residences and in other neighbourhood facilities.

Free spaces for play and outdoor activities in the vicinity of the residences should be protected from disturbing traffic noise.

Annex 2

PRELIMINARY PROGRAMME PROPOSALS OF THE URBAN RENEWAL COMMITTEE

The committee has worked out preliminary programme proposals as a basis for defining the complete programmes and the way in which the remodelling work is to be carried out.

The prememinary proposals indicate possible ways and means of transforming various districts according to whether they are to be used for housing or other activities or both, and whether the pattern of the town plan is to be kept or changed. The proposals also indicate the kind of population composition to be aimed at, e.g. whether there ought to be more families with children.

The urban renewal committee is also striving for a more beautiful and friendly environment. There should be opportunities for outdoor activities, games and sports. In its prememinary proposals the committee explains how it envisages the arrangement of the courtyards, parking, traffic, and other forms of service:

- all parking on courtyards should be eliminated;
- satisfactory playgrounds should be provided in each district; these should be accessible without the children having to go into the street;
- traffic should be reduced inside the districts and through-traffic prevented;
- protected communications should be arranged over or under larger traffic ways;
- parking places should be created within larger districts in the vicinity of the district being transformed or in individual buildings or areas within the district;
- walking and cycling paths, outdoor arrangements for sports, physical training, etc. should be improved.

Annex 3

GUIDELINES FOR TOWN PLANNING IN GÖTEBORG

Town planning as a rule implies working with groups of housing units, whose size and composition are determined not only by technical production requirements but also by demands for effective traffic separation, access to public transport and various services as well as good communications between the latter and housing. Suitable units are sought for school planning and the necessary population scales for food shops, day nurseries etc. are also considered. These services must be within walking distance from home and be possible to reach without coming into contact with motor traffic. The parking places necessary are grouped around joint facilities and are designed and located within the district under consideration in such a way as to avoid health hazards and maintain traffic separation. Many factors thus influence the form given to housing units which are usually grouped around a common fairly large centre with shops, social and cultural institutions, a school for the last three years of the "Grundskola", facilities for meetings, youth club, play and sports grounds etc.

The following current guidelines for town planning provide an indication of site needs etc. for the provision of joint service facilities in housing districts:

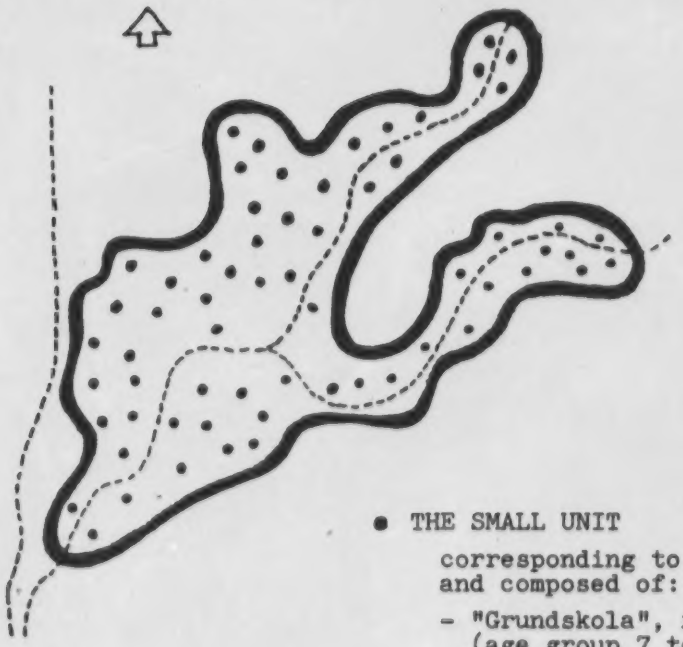
Schools: Children aged 7 to 15 are assumed to represent 13.5 per cent of the population (the large number of children during the first ten years of occupation of the districts are catered for through supplementary, provisional facilities). A school site requires 600 to 1 000 m2 per class (of 25-30 pupils) and easy access to general play and sports grounds (for the last three years of the "Grundskola" estimated at about 10 000 m2, and the middle level of the "Grundskola" at approximately 3 000 m2.

Full-time nursery school (day nursery):	100 places per 1 000 dwellings. A day nursery of normal size has about 50 places and requires a site of about 3 000 to 4 000 m2.
Leisure home (for children of 7-12, before and after school hours):	60 places per 1 000 dwellings.
Part-time nursery school ("play" or nursery school):	80 places per 1 000 dwellings. A nursery school of this type usually provides 40 places and needs a site of 600 to 1 000 m2.
Shops:	A self-service shop of 500 m2 of floor area demands a population of at least 3 000.
Parking:	For dwellings: the planning norm is 1.4 car space per dwelling. For shops: 40 to 70 car places per 1 000 m2 of housing floor area.
Playgrounds:	A minimum of 12 m2 of equipped play area per dwelling of which 1 m2 on the actual site of the residence (sandpits).
Sports grounds:	A minimum of 5 m2 of useful area per inhabitant (regular sports grounds and larger or smaller playing fields).
Walking distance to (maximum distance from the residence in districts with apartment blocks if no other specification given):	Bus or tram stop: 500 to 600 metres (in areas with individual houses: 750 to 1 000 metres). Shops for everyday needs: as a rule = distance to bus or tram stop. Schools: for the first six years of schooling, 500 metres. Point of call: 75 metres. Parking: 200 metres. Playgrounds: sandpits 50 metres, larger playgrounds or playing fields 150 to 400 metres.

The above guidelines are based either on recommendations from government departments (e.g. need for parking places) or on results of studies undertaken by the City of Göteborg itself (e.g. the need for nursery schools, playgrounds).

Annex 4

THE SMALL, MEDIUM-SIZED AND LARGE EDUCATION AND LEISURE UNITS PROPOSED BY GAKO FOR THE ANGERED-BERGUM AREA



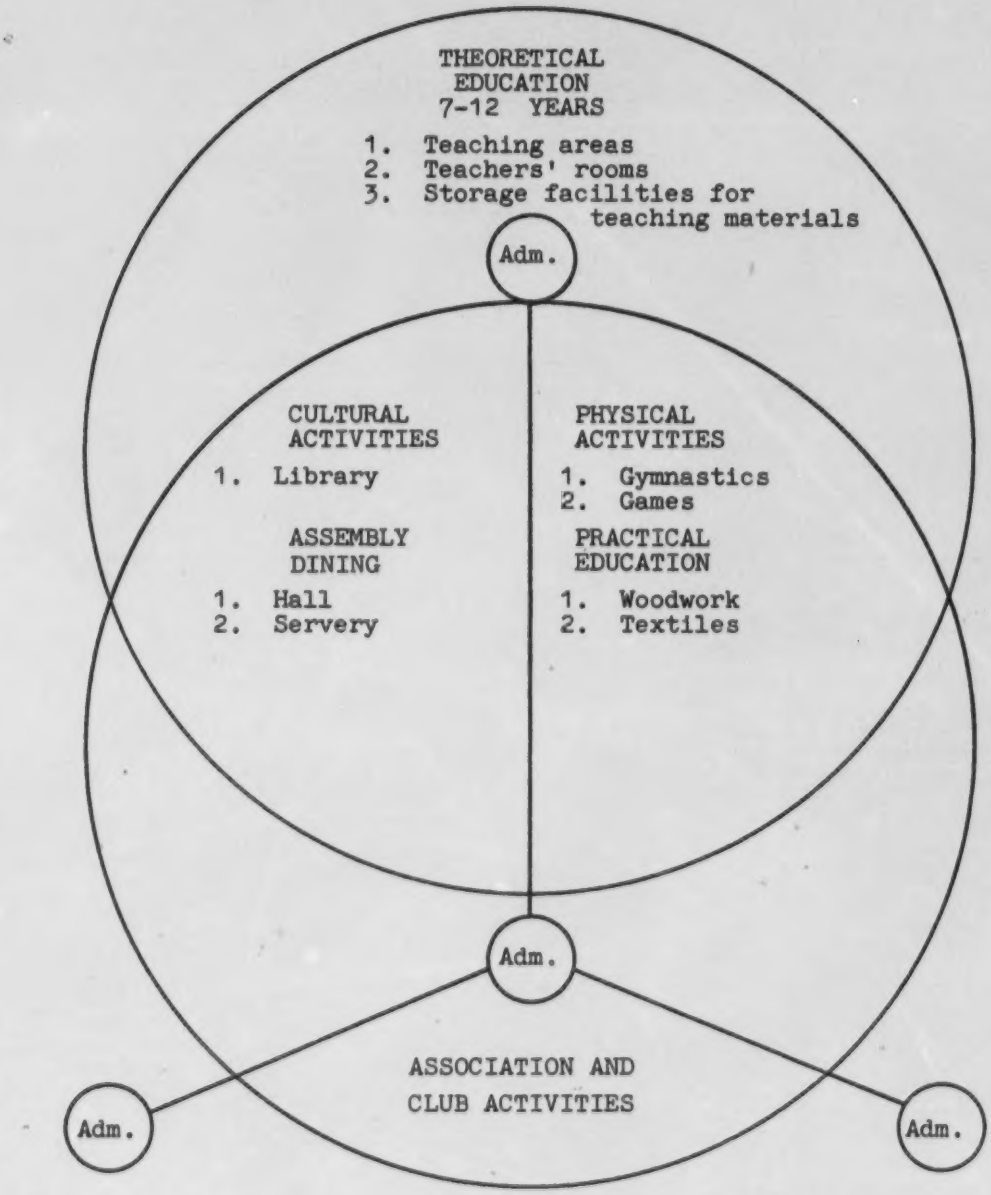
- THE SMALL UNIT

  corresponding to 1 000 dwellings and composed of:

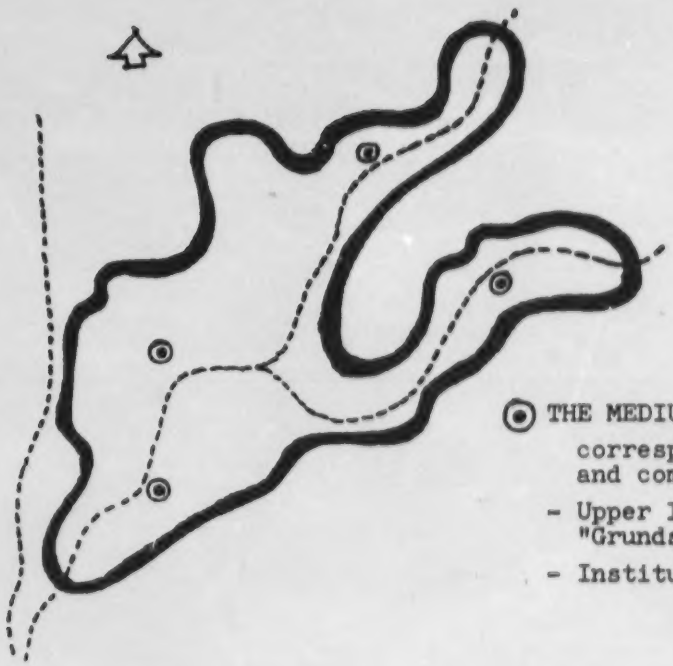
  - "Grundskola", first six years (age group 7 to 12)
  - Institutions for the education and care of the 0-7 year olds
  - Housing services, etc.
  - Association activities

  Total area: 2.5 hectares
  Number of pupils: 350
  Number of classes: 14

NUMBER OF UNITS: 60



THE SMALL UNIT



⊙ THE MEDIUM-SIZED UNIT

corresponding to 15 000 dwellings and composed of:

- Upper level block of the "Grundskola" (age group 13 to 15)
- Institutions for

culture
sports
association activities

Total area 12 hectares

Number of pupils 1 500

NUMBER OF UNITS 4

ALTERNATIVE TO THE MEDIUM-SIZED UNIT

⊙ Upper level of the "Grundskola" (age group 13 to 15) together with institutions for:

culture
sports
association activities

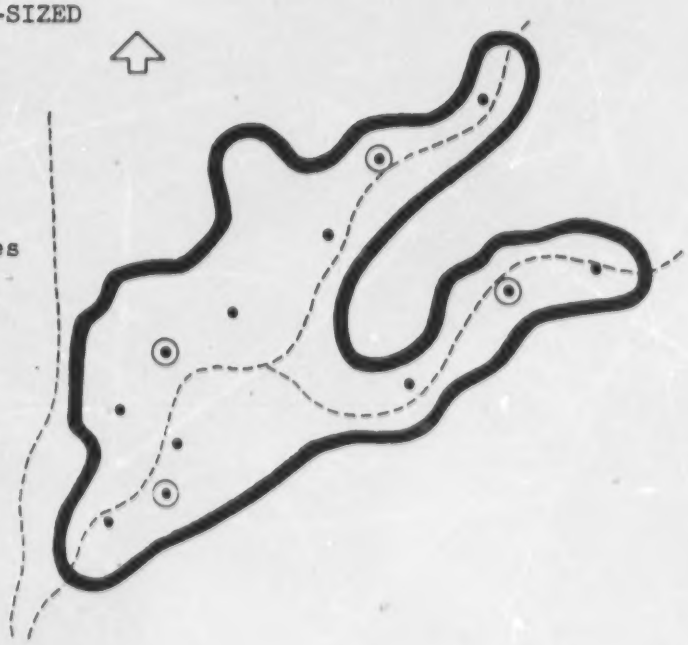
Total area 6 hectares
Number of pupils 600

Number of units 4

● Upper level of the "Grundskola" (age group 13 to 15)

Total area 3 hectares
Number of pupils 450

Number of units 8



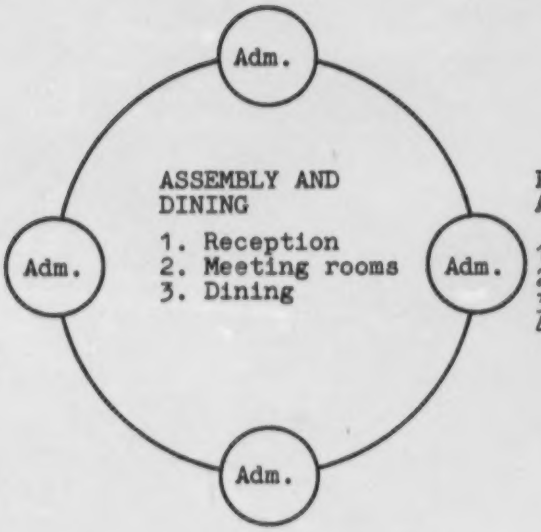
THEORETICAL AND
PRACTICAL EDUCATION

Departments:

1. Special education (slow learners)
2. Languages
   Mathematics
   Orientation subjects
3. Biology
   Physics
   Chemistry
4. Economic subjects
5. Arts and crafts
6. Domestic sciences

CULTURAL
ACTIVITIES

1. Library
2. Exhibition hall
3. Arts
4. Music



ASSEMBLY AND
DINING

1. Reception
2. Meeting rooms
3. Dining

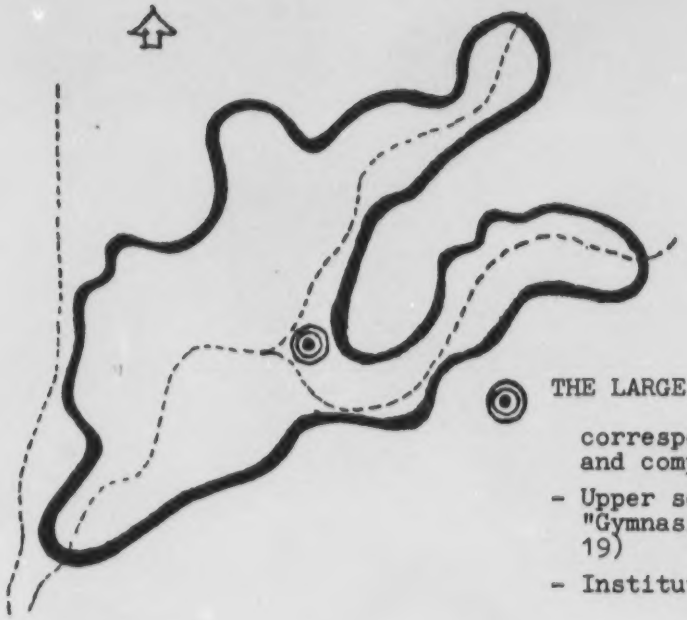
PHYSICAL
ACTIVITIES

1. Gymnastics
2. Athletics
3. Sports
4. Swimming

ASSOCIATION AND
CLUB ACTIVITIES

1. Rooms for pupils' association
2. Club rooms

THE MEDIUM-SIZED UNIT



THE LARGE UNIT

corresponding to 60 000 dwellings and composed of:

- Upper secondary school, the "Gymnasium" (age group 16 to 19)
- Institutions for
  - culture
  - sports
  - association activities

Total area 30 hectares

Number of pupils 6 500

ALTERNATIVE TO THE LARGE UNIT

Upper secondary school, the "Gymnasium" (age group 16 to 19), split into two, together with institutions for:

- culture
- sports
- association activities

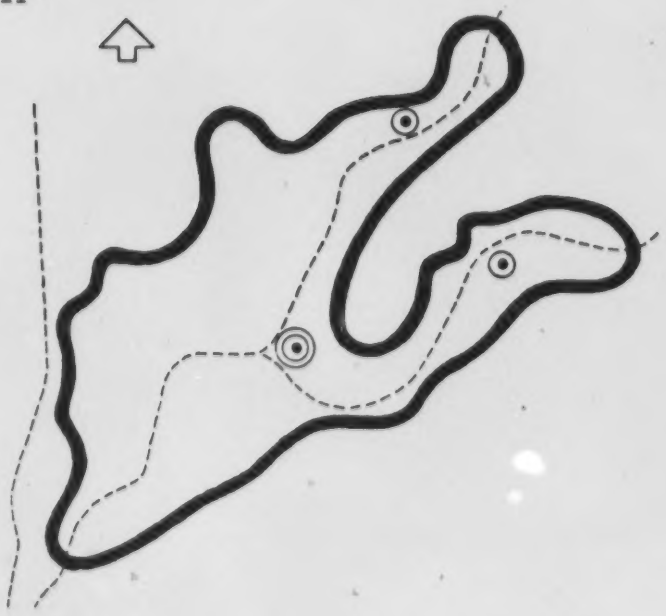
Total area 20 hectares
Number of pupils 3 300

Number of units 1

Upper secondary school, the "Gymnasium" (age group 16 to 19)

Total area 8 hectares
Number of pupils 1 600

Number of units 2



S7

THEORETICAL AND
PRACTICAL EDUCATION

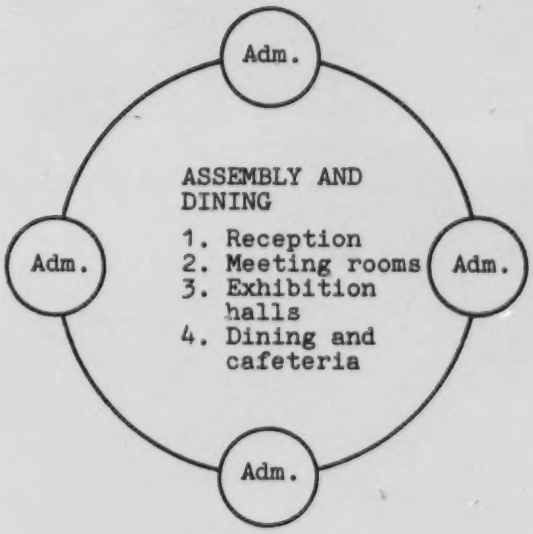
Departments:

1. Languages
2. Orientation subjects
3. Mathematics
4. Economic subjects
5. Physics and electrical engineering
6. Chemistry
7. Biology
8. Technical subjects
9. Laboratories

CULTURAL
ACTIVITIES

Institutions for:

1. Literature
2. Music
3. Arts
4. Drama
5. Dancing
6. Crafts



PHYSICAL
ACTIVITIES

Institutions for:

1. Gymnastics
2. Ball games
3. Athletics
4. Games
5. Swimming

ASSOCIATION AND
CLUB ACTIVITIES

Institutions for:

1. Pupils' association activities
2. Club activities

THE LARGE UNIT

RANNEBERGEN CENTRUM

by
SVEN HANSSON, JAN HELLNER
GUNVOR LANEVIK AND GUNNAR TRENNING

Educational Facilities Planning Division
Board of Education
Göteborg

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Part One

PROJECT BACKGROUND

GENERAL CONDITIONS

1. Rannebergen is one of the districts in Göteborg's present expansion area, Angered-Bergum, approximately 15 kms north-east of the inner city. Rannebergen Centrum is not an exceptional venture and its creation should therefore be seen in relation to urban development planning in Göteborg during the 1960s, outlined briefly below. The municipality of Göteborg is spread over a wide area (445 km2) and has 450 000 inhabitants. The town grew considerably during the 1960s and several neighbouring municipalities were incorporated to meet the need for land, in particular for housing. On 1st January, 1967 the total area of Göteborg more than doubled by the incorporation of, amongst others, Angered-Bergum. A master plan for the development of Angered-Bergum was drawn up by the municipality and presented in 1968. It was based on an assumed final population in this area of 130 000 - 150 000. A series of districts each accommodating 8 000 - 12 000 inhabitants, was to be grouped round a centre common to the whole area. One of these districts is Rannebergen.

2. The continued rapid expansion of Göteborg, one of the assumptions of the master plan, failed however to materialise for various reasons including changing economic conditions, with the result that the development of Angered-Bergum as originally planned, was no longer a valid proposition. Demand for housing fell steeply at the beginning of the 1970s and it became difficult to let flats in the outer districts. Furthermore, the validity of concentrating all development efforts on the Angered-Bergum area, began to be questioned since it meant creating an imbalance between job supply and housing accommodation in Göteborg. The chances of finding work in Angered-Bergum were very small and it had proved most difficult to attract industry there. The change of plans regarding the development of the housing districts in Angered-Bergum meant a reappraisal of the size of the centre of Angered; this in turn influenced the plans for and contents of Rannebergen Centrum. When Rannebergen, the third and last housing district in direct communication with the Angered centre, was planned it

was very uncertain when the Angered centre could be built. Some of the main services, such as the swimming pool and the sports hall, were therefore located in Rannebergen.

3. Housing policy in Göteborg was another factor of importance in this connection. In the early and mid-1960s there was a great need for housing and a large number of dwellings were built. The majority of those constructed in Göteborg were put up by public building societies. There are three of these, owned to 100 per cent by the municipality. They are non-profit making but are required to make ends meet. The building societies are an important part of the town's housing policy and are responsible for approximately 75 per cent of the built or planned flats in Angered-Bergum. They have the resources and opportunity to plan and develop complete housing areas, i.e. together with the municipal authorities they can be responsible for urban planning and also for the design, construction and administration of dwellings and all supplementary service facilities.

4. Finally, mention must be made of the new planning procedures put into practice at the end of the 60s in Göteborg to improve co-ordination of facilities and activities of the departments responsible in the municipality for education, leisure, sports and culture. Sectorisation, as common in Sweden as in other countries, means that, for example, medical care, social services, sports, leisure and education are managed by different municipal and state authorities. This is very much the case in Göteborg and within the cultural sector schools, museums, theatres, libraries and music depend on different departments. The provision of facilities for various activities is governed by central authorities only in those cases where adherence to centrally established norms is a prerequisite for obtaining state subsidies.

5. In connection with the planning of the Angered-Bergum area and following a decision taken by the Municipal Council in 1968, a working group with representatives from different administrations was formed to try to co-ordinate provision of services in the new housing districts in Angered-Bergum. The decision to form a group to co-ordinate planning was based on the study "Angered's Leisure Centre" carried out by a consultancy firm (GAKO) owned by the non-profit making building societies. The planning group for Angered (the Angered Group) included people in charge of the planning divisions of the departments for education, social affairs, outdoor sports and leisure, and library services. Later, representatives from the department of health, the museums and parks departments joined the group, which was constituted at head of department level. Planning was to cover co-ordination of the development of service facilities by all departments and not their overall policies. The Angered group reported to the responsible politicians in the municipality. This method of co-ordinated planning of facilities has since been used for other projects in Göteborg,

for example, the educational, cultural and leisure centre in Västra Frölunda. (1)

RANNEBERGEN: DESCRIPTION OF THE DISTRICT

6. The district of Rannebergen was, as mentioned above, the third to be developed in direct communication with the Angered centre after those of Gårdsten and Lövgärdet, and the fifth in the whole of Angered-Bergum. Rannebergen is relatively isolated, is situated on a wooded hill and connected by road (1.5 km) with the somewhat bigger residential area of Lövgärdet. The objective was to build approximately 1 600 dwellings in apartment blocks, and later about 400 in the form of individual houses in an area directly linked to that of the apartment blocks. The scope of the development was influenced partly by physical possibilities dictated by the topography of the area, partly by economic factors in respect of acceptable development costs per dwelling. The district turned out to be somewhat smaller than those formerly developed, which had been planned for 8 000 - 12 000 inhabitants. The town plan was drawn up by the municipal urban planning office and the non-profit making building society "Bostadsaktiebolag" (GSB) in co-operation with White's Architects Office, who were also acting as consultants to the Board of Education in matters of urban planning in relation to the school to be built at Rannebergen. The urban plan was adopted in April 1971. Housing development began in the autumn of 1971 and approximately 1 400 of the 1 600 dwellings to be provided in apartment blocks were completed by October 1975.

7. The flats in Rannebergen are grouped in 7-8 storey blocks, situated around a wooded park measuring about 300 x 400 metres. The Centrum which houses in the same building a school, a leisure centre, a swimming pool, a sports hall, a church, a shopping centre and a post office has been placed in the north part of this area. The park, which includes hilly as well as flat ground, contains playgrounds, ball pitches, tennis courts, an open-air dance floor, a sledge run, a day nursery, a leisure home, a combined nursery and primary school. The district is characterised by systematic traffic differentiation. Motor vehicle traffic is diverted to a ringroad outside the housing area. All service traffic, such as delivery vans, removal vans, taxis, rubbish collection lorries and emergency cars can reach the blocks from the ring road. A 15 metre-wide green belt next to the buildings and the parking area outside this forms a protection zone against traffic noise (see Figure 1).

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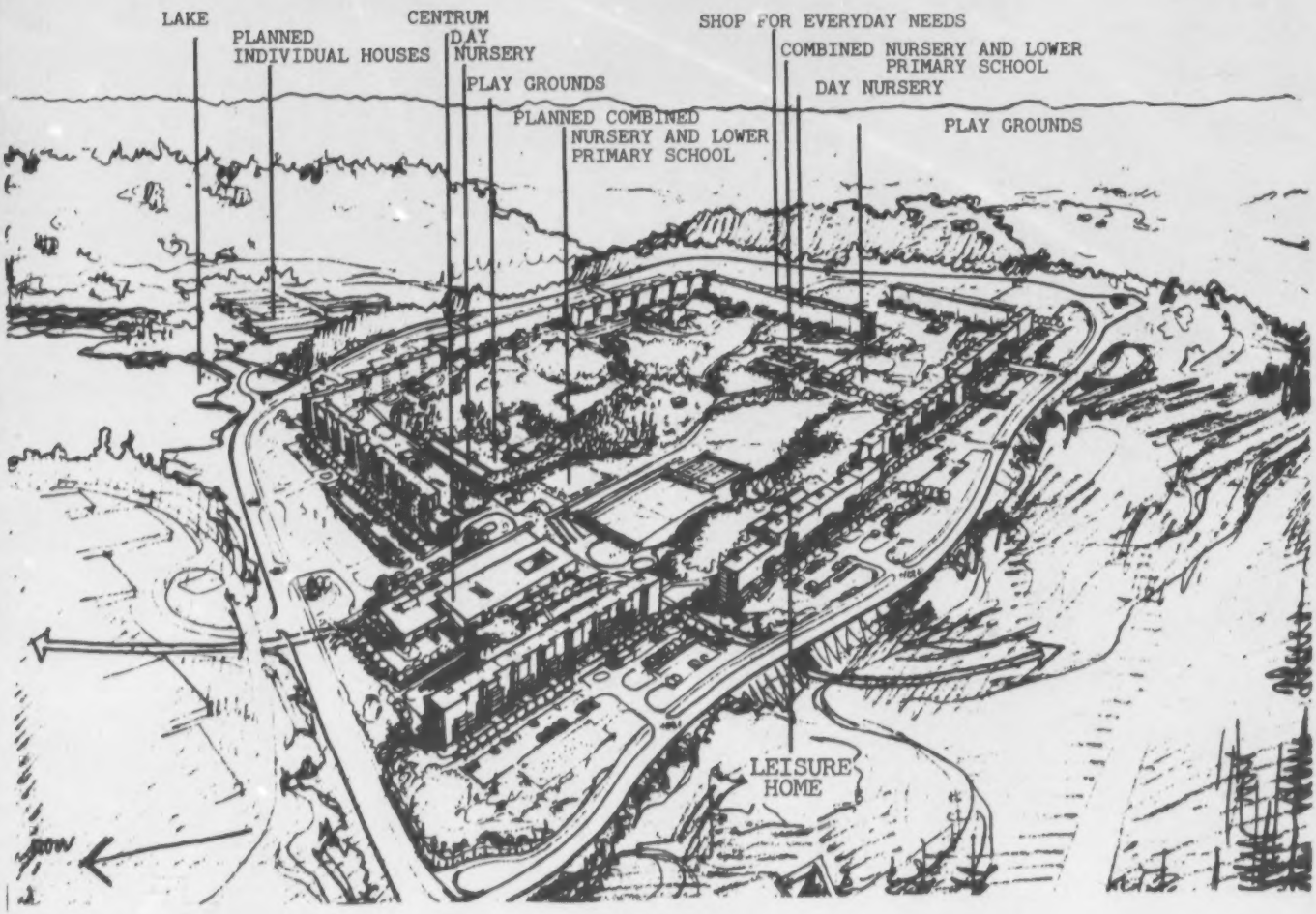
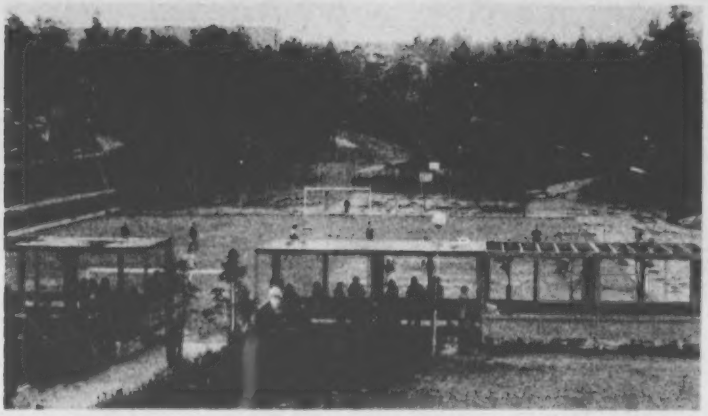
1) G. Trenning, "Planning Process of the Co-ordinated Centre of Västra Frölunda, Göteborg, Sweden", Building for School and Community: V. Sweden, page 137 of the present volume.

Figure 1 SITE PLAN OF RANNEBERGEN



General view (the Centrum is at the extreme left)



Playgrounds seen from the Centrum

The Centrum

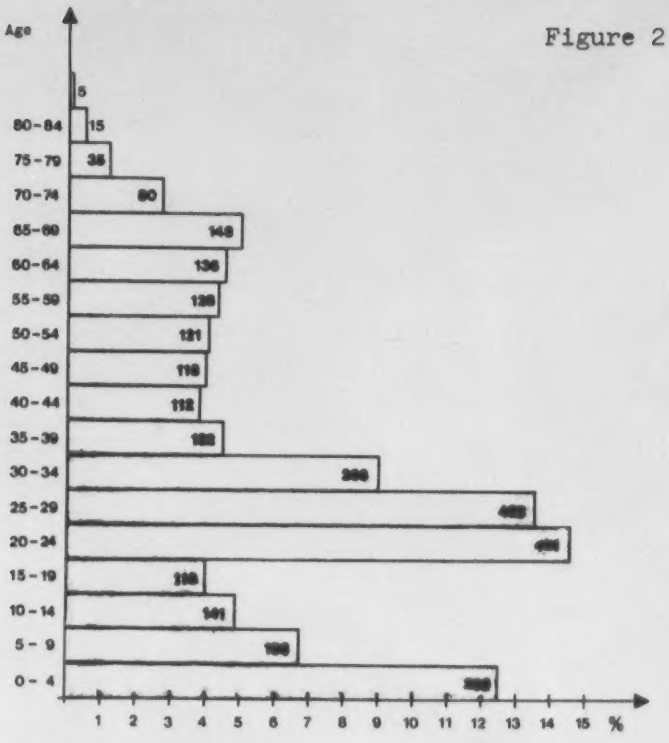


Figure 2 COMPOSITION OF THE POPULATION BY AGE (1ST NOVEMBER, 1975: 2 968 INHABITANTS)

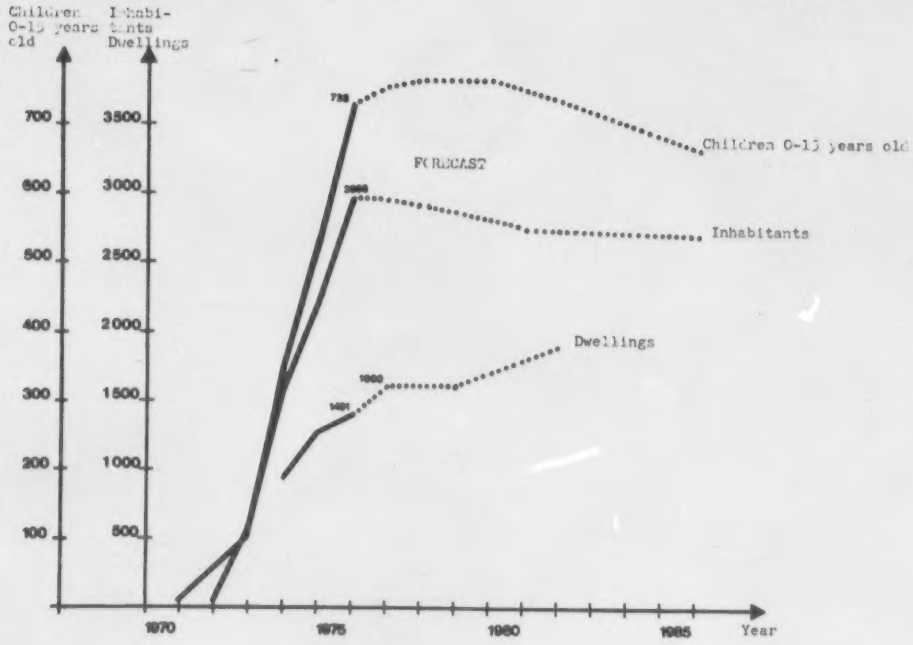


Figure 3 POPULATION FORECAST FOR RANNEBERGEN (NUMBER OF DWELLINGS)

Demographic Data

8. As can be seen from Figure 2, the population on 1st November, 1975 amounted to about 3 000. In comparison with other new districts in the outskirts, the age groups between 5 and 19 are small. This can partly be explained by the large proportion of small flats (1 to 2 room flats with kitchenettes) in Rannebergen. The number of retired people (over 67) is larger there than in other comparable residential areas. According to the population forecast for Rannebergen made by Göteborg's municipal office in February 1976 (see Figure 3), the total number of inhabitants is not expected to increase. Since this forecast was made, however, the municipality has decided that the area with 400 individual houses referred to in paragraph 6 is to be built, with construction to be started in 1979, which will probably bring the number of inhabitants to 4 000. This means, however, approximately 1 000 less than was anticipated when the district was planned.

Social characteristics

9. In the case of Rannebergen, the building society (GSB), had the possibility, when letting the flats, to ensure that the tenants would have the means of managing their rents quite easily. This is because there was a great demand for flats in Rannebergen due, according to GSB, to the fact that the district had a good reputation from the outset. The number of foreign citizens there is comparatively small - 13.7 per cent of the total population - compared with the district of Gårdsten where the proportion of immigrants is 28 per cent. The reason is probably that there was a noticeable decline in total immigration from other countries to Göteborg at about the same time as people were moving into Rannebergen. The number of people with some form of social problem is relatively fewer in Rannebergen than in other districts in the outskirts.

MOTIVATIONS AND OBJECTIVES

10. The fact that integrated facilities began to be planned in Sweden towards the end of the 60s is the result of a combination of factors. Generally speaking, the idea of increased co-ordination of services in society was "timely". The motivations behind Rannebergen Centrum are to be sought at different levels.

National Level

11. The extensive building of dwellings during the post-war period in Sweden had a number of undesirable consequences during the 1950s and 1960s. One of the most serious defects noticed was that the provision of services was lagging behind in the new residential areas. Schools, shops, leisure centres, health centres, communications, etc., were often not completed to the extent foreseen by the town plan when the dwellings were ready for occupation. Residents were extremely critical of the lack of services, their location and delayed completion as were the press, social workers and those responsible for developing the areas. Isolated attempts to achieve improvements were made. These generally took the form of co-ordination between certain community services within one and the same building such as the school, the district library and the sports hall.

12. During the 1960s a series of studies were made by state commissions to highlight the need for a changed and increased supply of housing services, as well as of cultural and leisure activities if improvements were to be made to the living environment. In 1967 a government commission was set up to investigate services in residential areas. The commission stresses in its first report (1968) the split in responsibilities as regards provision of services and points out that no body has assumed the task of co-ordination. Many Swedish households have "a clearly expressed need for services". Good services in housing areas are created at the town planning stage. The town plan should, amongst other things, try to achieve short walking distances to and from service facilities and locate these close together to attain effective use and a high degree of flexibility. The services commission developed these ideas further in their second report (1970) where it was stressed that the motivations for an improved supply of services are social as well as economic. On the economic side, questions of organisation are of great importance and cost savings can be achieved if service facilities are conceived in such a way as to allow joint use as well as changes in use.

13. As far as education is concerned, the curriculum for the nine-year compulsory comprehensive school, the "Grundskola" published in 1968, and that for the new upper secondary school, the "Gymnasium" school, issued in 1970, marked a widening of the concept of the school's role in society. Up to the mid-1960s school facilities were rarely used except for teaching children in the daytime. Certain facilities, such as assembly hall, dining room, music room, and gymnasium, were let, however, to private associations or clubs. Specialised teaching areas and classrooms were not suitable for alternative activities because of their special size and furnishings.

Equipment and material were the exclusive property of the school and were not to be used by "outsiders". Moreover, school buildings were often separated from other municipal service facilities. It is stressed in the new curricula that the school should form part of the community and be a centre for education, leisure and cultural activities within the housing area. The curricula engendered new ideas concerning the provision of services in which the facilities of the school would serve as a basis for new forms of activity. In the curriculum for the "Grundskola" it is for example stated that:

> "The school is part of society. If it is to succeed in promoting the development of pupils so that they can become good citizens, it must provide them with knowledge about society and strengthen their ties with it. Through mutual contacts between the school and the neighbouring community, its people and functions, pupils will gradually grow into and become part of this community and at the same time the school will become a matter of reality to the citizens."

14. The tendency to re-appraise the role of school as one of mainly imparting knowledge is confirmed and developed in the report on the internal working conditions of school - SIA. The SIA commission started its work in 1970, following a decision by parliament and its final report was submitted in the autumn of 1974. It emphasised that an overall view must be taken of society's responsibility for children and young people, necessitating intersectoral co-operation between those bodies or mechanisms in society which, in different ways, are in charge of organising activities for these age groups. A model is described in the SIA - report showing how such intersectoral co-operation can be organised. According to SIA, the school should not only provide education but also other activities before and after lessons and during breaks and other free periods. Furthermore, pupils should be offered the opportunity of taking part in various activities also after the compulsory school day is over either within the school or in nearby facilities, e.g. leisure homes and leisure centres. These ideas about the extended role of society in promoting the total development of children can also be found in the reports of other state commissions published in the early 1970s, such as that of the commission on early childhood education, covering day nurseries, pre-primary schools and leisure homes. These more general policy oriented opinions about the extension of collective services and the school's new role in the community influenced the politicians who make decisions on a communal level and paved the way for integrated service facilities such as the Rannebergen Centrum.

At the Level of the Göteborg Municipality

15. Discussions on the co-ordination of resources, especially in the fields of education, leisure and culture, had been going on in Göteborg for many years. They were intensified during the latter part of the 60s, with the presentation of the study "Angered's Leisure Centre" and the setting-up of the Angered group (paragraph 5). The ideas put forward in this study as regards co-ordination between the various departments responsible for the provision of services were developed within the Angered group. The majority of the departments had not previously been faced with planning problems of the dimension of those in Angered. It was considered impossible to reach the high level of services it was hoped to provide in this area unless certain resources were used jointly. Through a better use of resources beyond the boundaries of the departments better services could be offered to the population, without a proportional increase in investments.

16. The motivations for integration which thus developed at the time when the services in Angered were being planned, were partly founded on earlier experience of facilities co-ordination, in the first instance between school and other activities, partly on knowledge of integrated projects being planned or having been implemented both elsewhere in Sweden and abroad. Co-ordination of certain activities had already been made in Göteborg. District libraries for instance, had, in some cases, been accommodated in schools, as had sports halls and assembly halls. Leisure facilities however, had not been combined with schools to any great extent. In Sweden, the Brickebacken project in Örebro (completed in 1972) has influenced the design of Rannebergen Centrum. The same Architects Office (White) which designed Brickebacken and was responsible for conceiving the service facilities in Lövgärdet, was appointed for the Rannebergen district. The centres in Lövgärdet and Rannebergen were completed at the same time in the autumn of 1974 but planning and design work on the centre in Lövgärdet started somewhat earlier than that for Rannebergen.

17. The clearest if not the strongest motivations directly related to the project itself, are those emanating from Göteborg's "bostadsaktiebolag" (GBS), i.e. one of the three public building societies in Göteborg mentioned earlier. This non-profit making society, played a triple role in the Rannebergen project - as initiator, builder and manager From the building society's viewpoint, an integrated centre was desirable for several reasons. The unfavourable economic trend had resulted in a decreasing demand for dwellings situated a long way from the inner city. Due to the experience gained in other areas in the outskirts, where in

some cases almost 40 per cent of the flats remained unlet, the GBS was anxious to make Rannebergen as attractive as possible, in particular by providing a high level of services. By assembling and concentrating large parts of these services in a single centre, it would be possible to guarantee that the services would be available to the residents when the dwellings were ready for occupation. The high level of services sought implied a solution which both enabled optimum use to be made of the centre and meant the lowest possible building and running costs. Finally, to make the residential area even more attractive, the building society sought a solution which would, as far as possible, preserve the natural environment of the district. To achieve this it was essential to ensure that the site required for the centre would take up as little as possible of the wooded parkland in the middle of the area.

PLANNING BACKGROUND - BASIC PROGRAMME

18. The range of services to be provided in Rannebergen was decided on the basis of the overall programme for service facilities in Angered-Bergum drawn up by the Angered group. This overall programme meant to show what the development of Angered-Bergum according to the then existing plans would entail in municipal investment and running costs for service facilities, and at the same time constitute a basis for activity planning within the municipality as a whole.

19. In the study "Angered's Leisure Centre" which had served as a basis for the decision by the Municipal Council on the co-ordination of planning and on the setting-up of the Angered group, it was proposed that leisure centres should be built at the same time as dwellings. These leisure centres were to include facilities for education, social and commercial services and housing maintenance services. It was considered highly appropriate that schools should form the focal point of these facilities, especially since leisure activities could then be integrated into school facilities, while the school, in its turn, would benefit from the permanent addition of leisure facilities. It was suggested in the study that such leisure centres should be planned according to three sizes: the smallest unit constituting a neighbourhood centre for a group of dwellings (1 000 to 1 500) and located within walking distance for the residents; the medium-sized unit intended to serve a complete urban district (8 000 - 10 000 dwellings), and the largest unit offering services for the whole of the Angered area. In the comments made by the departments concerned regarding the study, interest was expressed in the theoretic solutions

proposed. There was criticism, however, of certain suggestions which it was felt did not coincide with the experience of the departments, for instance in terms of size of facilities, location of schools, leisure centres, etc.

20. The ideas put forward in the study were further developed by the Angered group. The group began its work by collecting information on the wishes of respective departments. On the basis of the population scale for each unit (the large, the medium-sized, the small), the departments assessed their requirements for various facilities. The information thus collated concerned type of facility, construction cost, running and staff costs, total floor area, size of site required, number of parking places, hours of use, considerations as regards desirable location in the town plan, etc. The material was then analysed within the Angered group and data presented showing the economic implications and the possibilities that existed for co-ordinating facilities between various sectors of activity.

21. On the basis of the data compiled from the departments, summary tables were drawn up showing the types of facilities that could be considered at various population scales. Furthermore, the context of municipal services was defined for a model district with approximately 10 000 inhabitants (4 000 dwellings) to serve as a basis for the dimensioning and planning of services in the various housing districts in the Angered area. (See Table 1).

Table 1

SERVICE FACILITIES IN A DISTRICT OF 10 000 INHABITANTS

Facility	Number
"Grundskola" (1 to 9 years)	1
"Grundskola" (1 to 6 years)	2
Leisure centre (medium-sized)	1/6 (i.e. 1 centre common to 6 districts)
Leisure centre (special)	1/3
Leisure centre (small)	3
Leisure home	3
Day nursery (64 places)	2
Day nursery (35 places)	1
Nursery school (20 + 20 places)	6
Childcare centre with ante-natal service	4
Ice-rink, ice-hockey	1/2
Swimming pool, small	1/2
Sports hall	1
Physical training room	1
Sports fields	1
District library	1/2
Playgrounds	3

The difficulties that arose in co-ordinating planning efforts were due among other things, to the lack of knowledge of co-ordination procedures of this kind; the departments had difficulties in releasing staff from their normal duties and there were differences in the norms applied to assess service needs or - and this was true for a majority of departments - such norms were inexistent. Furthermore, there was a tendency in some departments to try to achieve a higher level of services within their own sector of activity than could be considered economically feasible. Finally, it became clear that certain departments had difficulties in specifying their own needs. The work within the group, therefore, became a development process which continued for several years before taking a more concrete form. Today, co-ordinated planning forms an integral part of the administrative routines of the departments.

22. The planning data elaborated by the Angered group were used as a basis for determining the scope of the services to be provided in Rannebergen. Each department submitted a programme of facilities within its own sector of activity. The discussions and evaluations, which were made partly at the level of the departments, partly at political level, resulted however in the provision of a higher level of services in Rannebergen than was warranted by the size of the district (see Table 2). The reason for this, as mentioned earlier, was that it was uncertain, at the time, when the Angered centre with its main services would be created. Also, bearing in mind the growing difficulties in letting flats in certain districts of the outskirts, a special effort was thought worthwhile in Rannebergen. These considerations led to the additional provision of a swimming pool and a sports hall.

Child Care/School - Some Definitions

Pre-primary school is a common name for day nurseries, pre-primary part-time schools (nursery schools) and leisure homes. General pre-primary education was introduced on 1st January, 1975 and implies that the municipalities shall provide pre-primary school places for all 6 year-olds. Children for whom there is no place in the day nursery have the right to a place in the part-time nursery school.

Day nursery for taking care of children of working parents for at least 5 hours a day. Ages 0.5 - 7 years.
Part-time nursery school implying regular attendance in groups for a period of less than 5 hours a day. Ages 4-7 years.
Leisure home for taking care of children of working parents during the time the children are free from school. Ages 7-14 years.

General pre-primary education (for 6 year-olds) is free of charge; in all other cases charges are made according to parents' income.

Park playground

The park playground is an activity with open access and is free of charge, allowing children aged about 4-12 to play indoors as well as out-of-doors.

Compulsory Basic Education, "Grundskola"

Lower Level (L) : Grades 1-3, ages 7-9 years; 25 pupils/class.
Middle Level (M) : Grades 4-6, ages 10-12 years; 30 pupils/class.
Higher Level (H) : Grades 7-9, ages 13-15 years; 30 pupils/class.

Table 2

LIST OF MUNICIPAL SERVICES TO BE PROVIDED IN RANNEBERGEN

(1 600 flats in apartment blocks plus 400 individual houses, 5 000 inhabitants)

Department	Number	Facility	Capacity	Floor Area according to norms
Education	1	Compulsory "Grundskola", lower cycle (L-age group 7-9) Middle cycle (M-age group 10-12)	600 pupils 4 x 3L, 3 x 3M	4 130 m^2
Social Affairs	1	Leisure centre		1 200 m^2
	2	Pre-primary, part-time (nursery school)	2 x 80 pupils	2 x 300 m^2
	2	Pre-primary, full-time	1 x 64 places	825 m^2
		(play nursery)	1 x 50 places	650 m^2
	2	Leisure home	2 x 15 places	2 x 150 m^2
	4	Leisure "cottages"*		4 x 150 m^2
Sports	1	Swimming pool* Sports hall*		500 m^2
Parks (part of Roads Department)	2	Playgrounds*		2 x 75 m^2

* As and from 1st January, 1976, administered by the Leisure Department. This Department was formed by a fusion of the leisure division of the Social Affairs Department, the Sports Department and the parks division of the Roads Department.

Note: The table shows the service needs in accordance with the standard schedules of the departments, i.e. prior to any possible integration of facilities.

Part Two

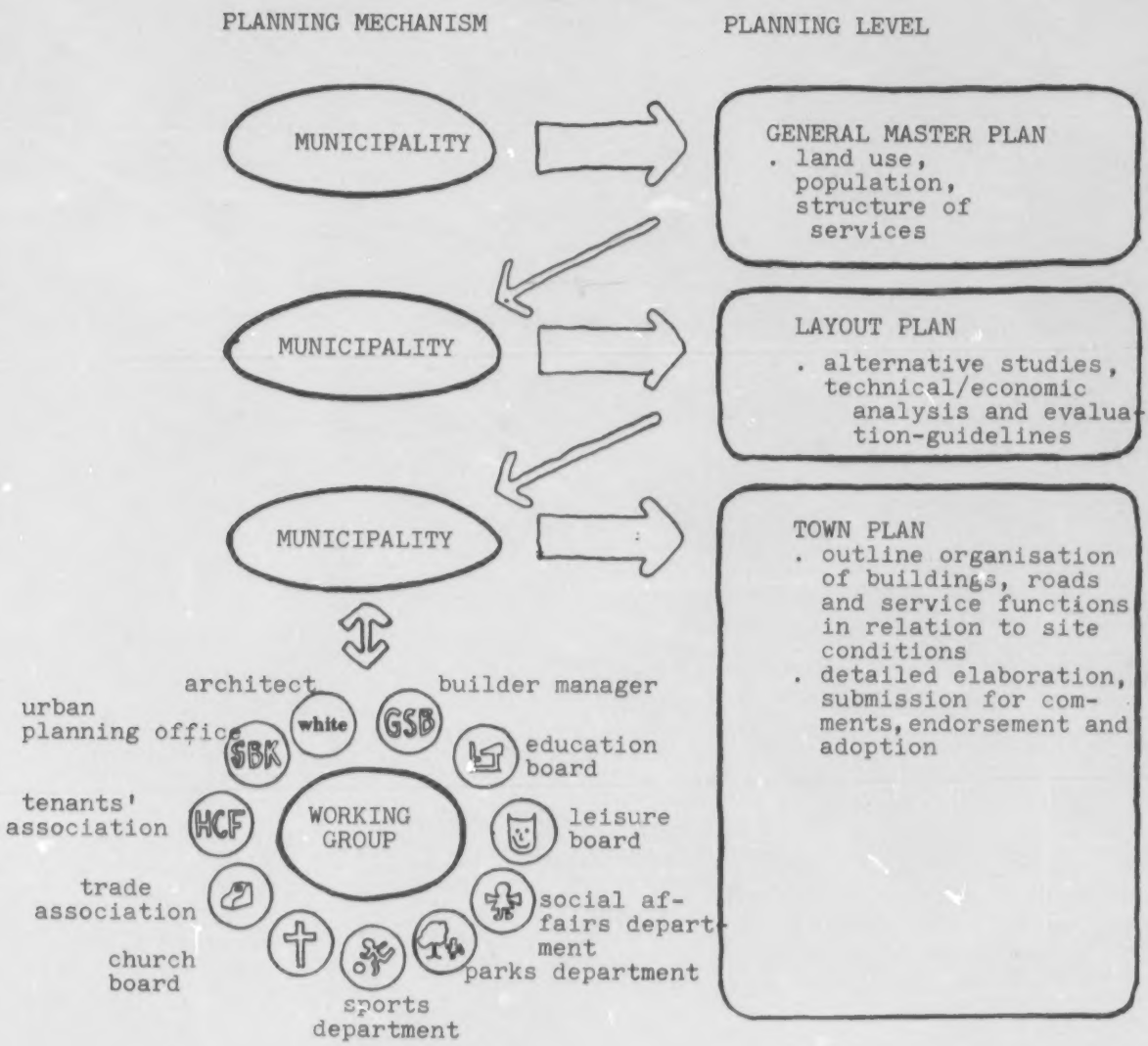
PROJECT DEVELOPMENT

THE PLANNING PROCESS

23. The planning process from master plan to town plan is illustrated by Figure 4. Angered was proposed as an expansion area of Göteborg as early as in the beginning of the 1960s and the municipality then decided to have a physical master plan made for the area. This general master plan indicates land use on the basis of site conditions and communication networks. It also provides forecasts as regards population, shops and employments. The municipal urban planning office drew up a series of layout plans for Rannebergen in 1968-69 (13 different versions). Two of these were put aside giving different solutions in terms of traffic networks but the same as far as land use was concerned. A cost analysis of the alternatives was made and, following political decisions, these alternatives came to be used as a basis for the continued detailed planning, and to play an important part in the determination of the scope of services to be provided in the area. The layout plan covered 1 800 dwellings in apartment blocks and about 500 in individual houses. The basic idea was to utilise the central green area and group the buildings on the edge of the hill so that the residents would have a view over the countryside and the town.

24. The elaboration of the town plan started in March 1969. By this time the municipal building maintenance office ("fastighetskontoret") had decided to allocate land to the building society, GSB, which engaged White's Architect's Office AB as consultant. The first six months were devoted to searching for a suitable form of construction which would fit in with the environment, the road network and the location of the tramline (which in turn determined the position of the Centrum, the school, etc.). During the autumn of 1969 the contours began to emerge, with the architect (White) working in conjunction with the municipal urban planning office and GSB, and a first proposal was endorsed by the GSB Governing Board in September 1969. Immediately afterwards, the municipal departments initiated a co-operation at senior official level in order to try to co-ordinate the provision of services in the district in

Figure 4 FROM GENERAL MASTER PLAN TO TOWN PLAN



accordance with the decision in principle taken by the Municipal Council in favour of co-ordination, decision taken in connection with the setting-up of the Angered group.

ORGANISATION AND METHOD OF WORK

25. From Figure 4 it can be seen that a working group was set up at the stage of elaborating the town plan. This group, which was not formally appointed, consisted of representatives from the building society (GSB), the municipal urban planning office (SBK), the architect (White), the tenants' association, the departments concerned, church and local trade associations. Usually the group was called to meetings jointly by the SBK, GSB and White. Attendance at meetings varied according to the nature of the items under discussion. The representatives of the departments in the group, people normally in charge of town planning and building matters within their departments, reported progress to their respective departments. In this way, certain questions reached Head of department level for their solution. As the project developed and entered a technical stage, new representatives were added by the departments and other parties concerned. The political bodies - the Boards of the Departments, the Municipality, the Municipal Council - were brought in from time to time to approve and endorse programme and planning proposals.

PROGRAMMING AND ELABORATION

26. Once the departments had submitted their basic programmes for the service facilities considered necessary in Rannebergen, the next stage consisted in an analysis of these programmes by the working group with a view to achieving co-ordination and joint or shared use of facilities. A study was made to determine what activities could be re-structured and linked together, and how this could be done without causing conflicts of an economic or operational nature. The working method adopted consisted in translating the preliminary programmes from various sectors into sketch plans for discussion. The programme requirements gradually became more precise. The special technical conditions (site, foundation and urban planning questions) which applied in Rannebergen were studied parallel with the programming work. After discussion within the working group, it was decided to concentrate to the Centrum those services which were to serve

the whole district (or a larger district) and to locate the others in the green area in a network of very small units. In this way the more important services were grouped in a centre which would serve as a meeting point for all those living in the district and the role of which it was hoped would be similar to that of a square. Besides municipal services, the Centrum included church, shops and post office. The working method used at the town planning stage involved a "rolling" programme analysis, the different steps of which cannot be recorded exactly. The description that follows has therefore been limited to three phases.

Phase 1 : initial programme proposals
Phase 2 : proposals elaborated by the working group intended to serve as a basis for town plan, financing arrangements and construction
Phase 3 : the programme as implemented.

Grouping of Facilities in the Centrum Area

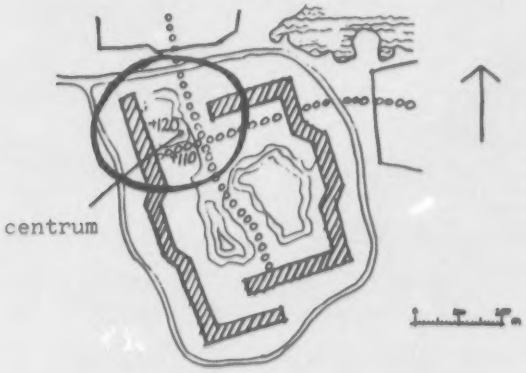
27. Phase 1 began with an analysis of the part of the district (Figure 5a), which was to accommodate the districts services centre and of the way in which the units to be included in the centre could be placed in relation to each other. The location of the Centrum was determined by the planned tramline and the need for direct connection with the tram stop. Space in the Centrum area itself was limited because of land use requirements and the nature of the site, the latter consisting mainly of a moorland with a knoll rising about 10 metres above the moor. The point of departure was a theoretical model of the activities planned for the Centrum - arranged mutually according to requests from the education department, amongst others. Access to the units was by a road on one side and a park pathway on the other. The model plan called for relatively large, flat surfaces and allowed great flexibility - if it could be applied - in the further planning and design (Figure 5b).

28. In its instructions to the architect the Education Department stated that the objective should be to :

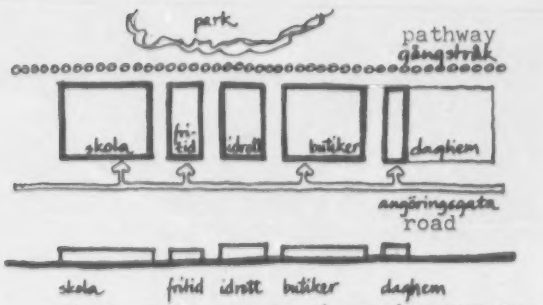
a) combine the school playing-fields and playgrounds with the facilities to be provided in the public park, common to all residents in the district;
b) reserve space for temporary mobile classroom units and ensure the possibility of a flexible extension of the school;

Figure 5 GROUPING OF FUNCTIONS IN THE CENTRUM

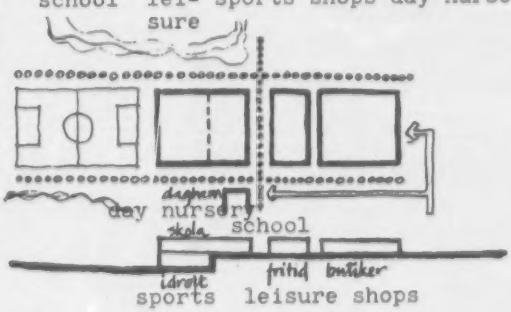
a) location and site conditions



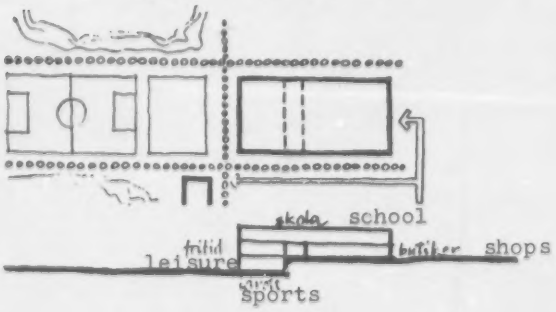
b) model solution



c) school above sports facilities



d) school above leisure facilities and shops, sports facilities in the basement



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c) locate the educational facilities as well as the space reserved for the temporary units as near as possible to the park, cut off from the commercial part by a leisure area with accommodation for leisure activities in conjunction with the school's dining, physical education and crafts facilities.

The object, as illustrated in Figure 5b), was difficult to achieve on the actual Centrum site. By taking advantage of the site and placing the activities above one another on several storeys, the free space was increased, which meant that the moor area could be taken over as common playing fields and sports grounds. Figure 5c) shows the combined school/sports block, considered feasible from an administrative viewpoint. Figure 5d) shows a concentrated Centrum where the school facilities are situated above the leisure part and the shops, and at yet another level below the sports facilities. The advantage of this solution was the balance it provided between the site area taken up by the building and the free space required for play and sports as well as the freedom it procured to allow or limit internal communications between various activities, in one and the same building.

29. The disadvantages, as seen from the school's point of view were three-fold:

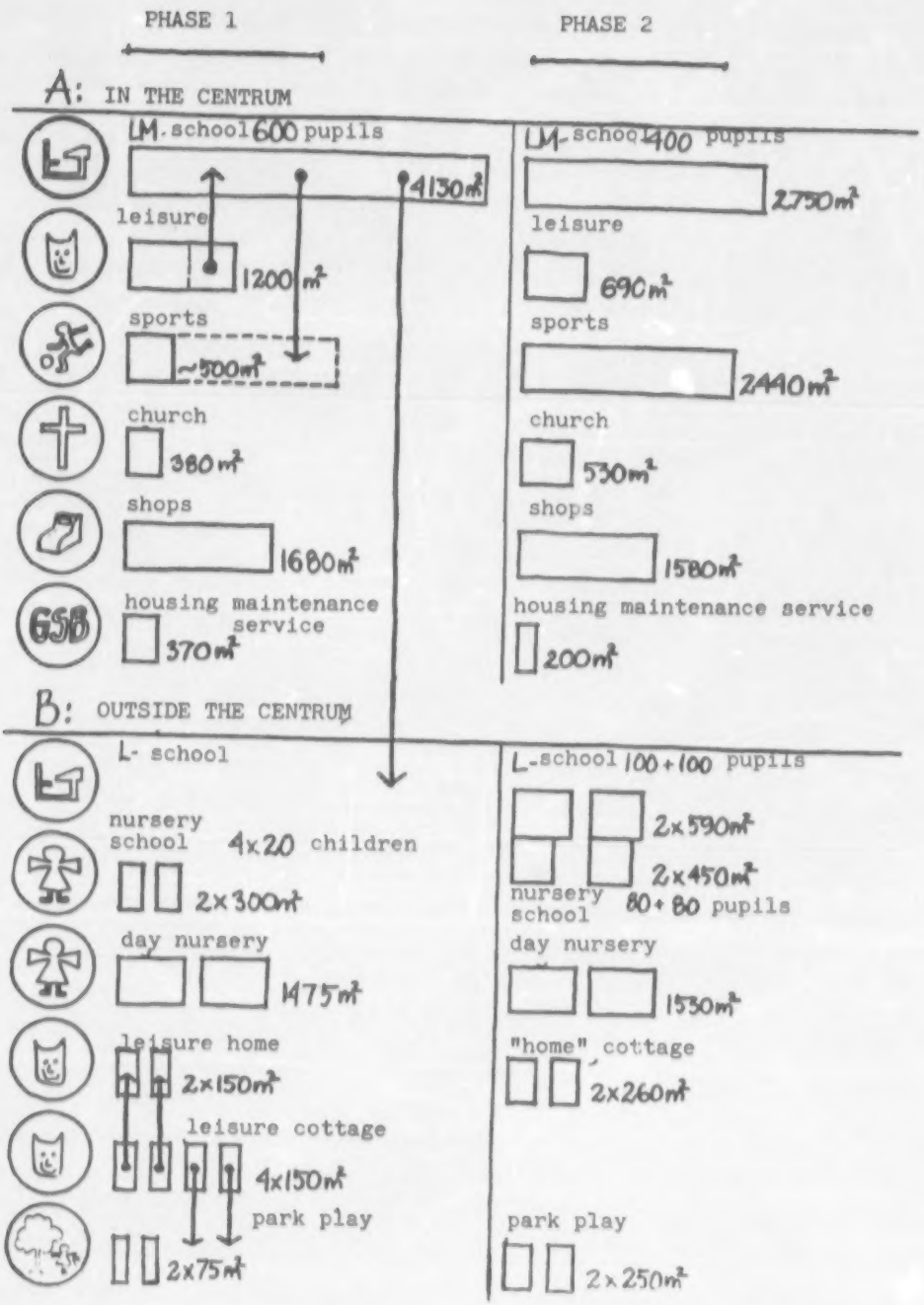
i) uncertainty as to whether the state subsidy would be granted, as at this time it was subject to the stipulation that the building was owned by the municipality;
ii) difficulties in avoiding conflicts between pupils and shop-owners due to the proximity to the shops;
iii) difficulty in providing the necessary flexibility for an extension of the school according to needs.

The conflict referred to in ii) above was solved by not providing any internal communications between the school and the shops. Moreover, the wide range of leisure activities offered is meant to lessen the pupils' interest in the shops. The lack of flexibility as regards possible future extension mentioned in point iii) is the most obvious disadvantage, as the actual number of pupils today does not correspond to that forecast at the planning stage.

Programme Co-ordination

30. Figure 6 is a diagrammatic presentation of the modifications made in the schedules of accommodation between Phase 1 and Phase 2, i.e. shows how

Figure 6 PROGRAMME CO-ORDINATION



the basic programmes were co-ordinated as a result of the analysis of the working group. This presentation of areas does not specify the functions or rooms that are re-allocated, nor the method of work used in the development from Phase 1 to Phase 2. The activities which were largely restructured and inter-dependent are the "Grundskola" (LM), leisure activities and the pre-primary school's part-time groups (nursery school). The connection with the swimming pool and sports hall also affects the school. These units "matured", after several exchanges of ideas, into precise programme requirements which formed the basis of political decisions.
The church, the shops and the housing maintenance service of the GSB - independent of other activities - have developed their own schedules of accommodation. As far as these functions are concerned, co-ordination has implied only discussions on the internal positioning of these activities.
The size and location of the day nurseries were specified relatively early and they were unsuitable for direct integration with other activities.
The need to reserve space for future extensions was taken into consideration.
Apart from the leisure centre in the Centrum, the basic programme also indicated a need for four separate cottages for club activities, as well as for two leisure homes to be located in the park. Eventually, discussions concerning the possibilities for co-ordination led to the following solution: the two leisure homes were each combined with a leisure cottage, and these units were labelled "home cottages", one in the west (completed) and one in the east (future reserve). In addition, a leisure part was incorporated into each of the park play cottages for park play.

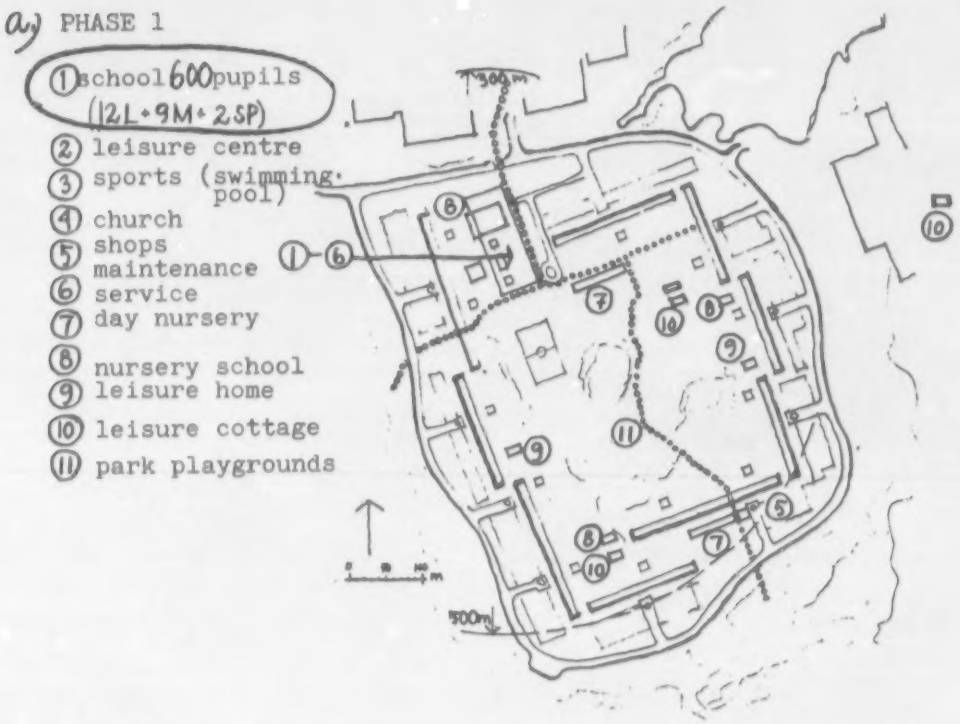
Restructuring of the School

31. Figure 7 shows how the school in Phase 1 is concentrated within a single facility for 21 classes at the lower (L) and middle (M) levels of the "Grundskola", with 600 pupils. When the discussions about integrating the school with other activities were taking place, a debate was going on as to the most suitable size of school, both in respect of the school environment as such and with a view to meeting the demand for phased construction. The sketch programme according to Phase 1 (Figure 7a) resulted in a search for other solutions in order to reduce the size of the school in the Centrum and to facilitate co-ordination between the lower level of the "Grundskola" and the nursery school.

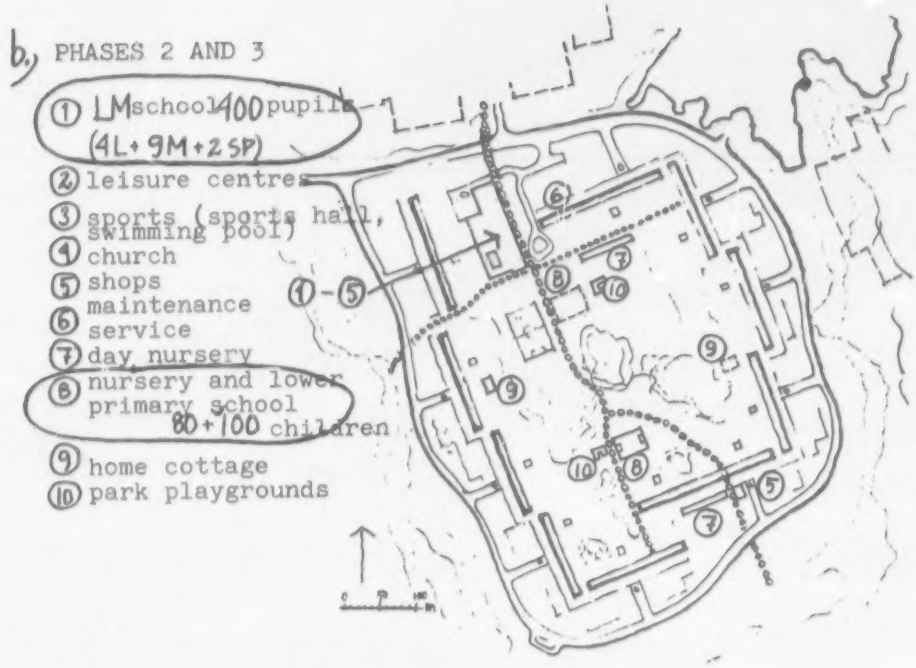
32. The first solution proposed was to take a one entry form at the L-level (grades 1-3) away from the Centrum school and combine it with the nursery school in the southern part of the district. After further discussions, also with the National Board of Education, a solution was found which meant

Figure 7 LOCATION OF SERVICES IN THE DISTRICT

a) PHASE 1



b) PHASES 2 AND 3


1 LM school 400 pupils (4L + 9M + 2SP)
2 leisure centres
3 sports (sports hall, swimming pool)
4 church
5 shops
6 maintenance
7 service
8 day nursery
nursery and lower primary school 80 + 100 children
9 home cottage
10 park playgrounds

splitting the L-level. Grades 1 and 2 were placed in two smaller units in the park and were combined with the pre-primary school [Figure 7b]. Thus each of these schools were to contain 4 classes at L-level (two grade 1 and two grade 2, in all, 100 children) together with 4 nursery school groups (80 children). The school in the Centrum, therefore, covered grades 3-6 (4 classes grade 3 plus 3 x 3 classes grades 4-6). By this split, a balanced distribution of pupils was reached and the combined nursery and L-level schools could be linked with the two park playgrounds that were planned. For the children, the co-ordination of lower primary and nursery schooling meant a gentler transition to compulsory education. From the experience acquired so far the separation of the lower grades has not entailed any disadvantages. The pupils beginning in grade 1 get a teacher who can accompany his or her class throughout the lower level and thus also to the Centrum school in grade 3, which means that the pupils find it easier to adapt themselves to the new environment of the Centrum school. The organisation of schooling in Rannebergen is shown in Figure 8.

The Centrum

33. How the Centrum was modified as to contents and character between Phases 1 and 2 can be seen from Figures 9 and 10. Besides the reduction in the size of the school the gymnasia were replaced in Phase 2 by a sports hall. At ground floor level the open interior square accessible from two pathways (Phase 1) has been transformed into accommodation for leisure activities communicating only with the school (Phase 2). In Phase 3 (Figure 11), the entrances at the floor level of the school have been separated so that the youngest pupils (grade 3) have their own cloakroom. At the planning stage, the central study hall was built around a patio providing natural lighting but which for economic reasons, was transformed into teaching area with artificial lighting.

34. On the ground floor the sports hall was linked with the swimming pool for personnel reasons. As a consequence the pedestrian link with the shops is duller than it was in phase 2. In some respects phase 3 reveals that successively changing programme requirements at the planning stage have resulted in unclear design solutions. Experience shows that such unclear solutions in terms of layout are not unusual. In the effort to eliminate all disadvantages, those who are going to use the facilities often wish to change details at a late stage, on the basis of experience from other projects, where, however, conditions have often been different. The result of this is often that the finished product is less good because the basic ideas which existed at the outset cannot be followed-up.

Figure 8 ORGANISATION OF SCHOOLING IN RANNEBERGEN

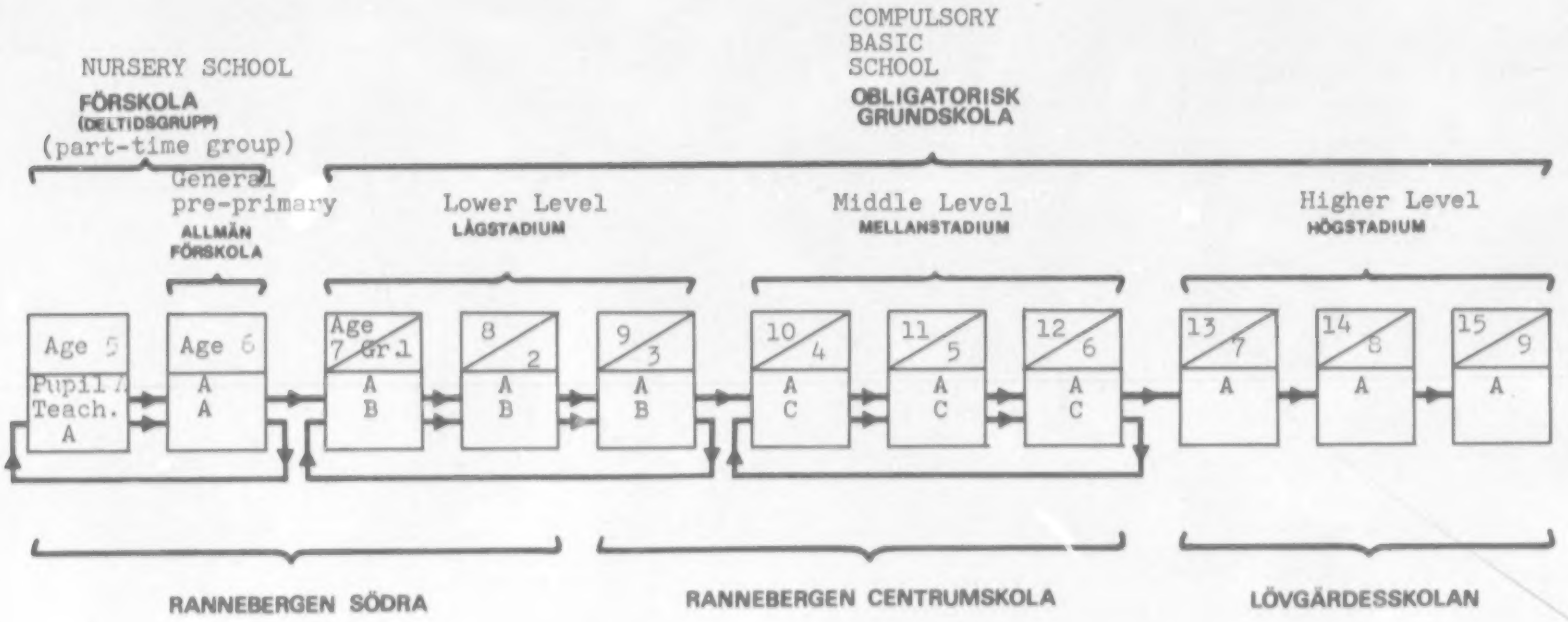


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Figure 9 CENTRUM PHASE 1

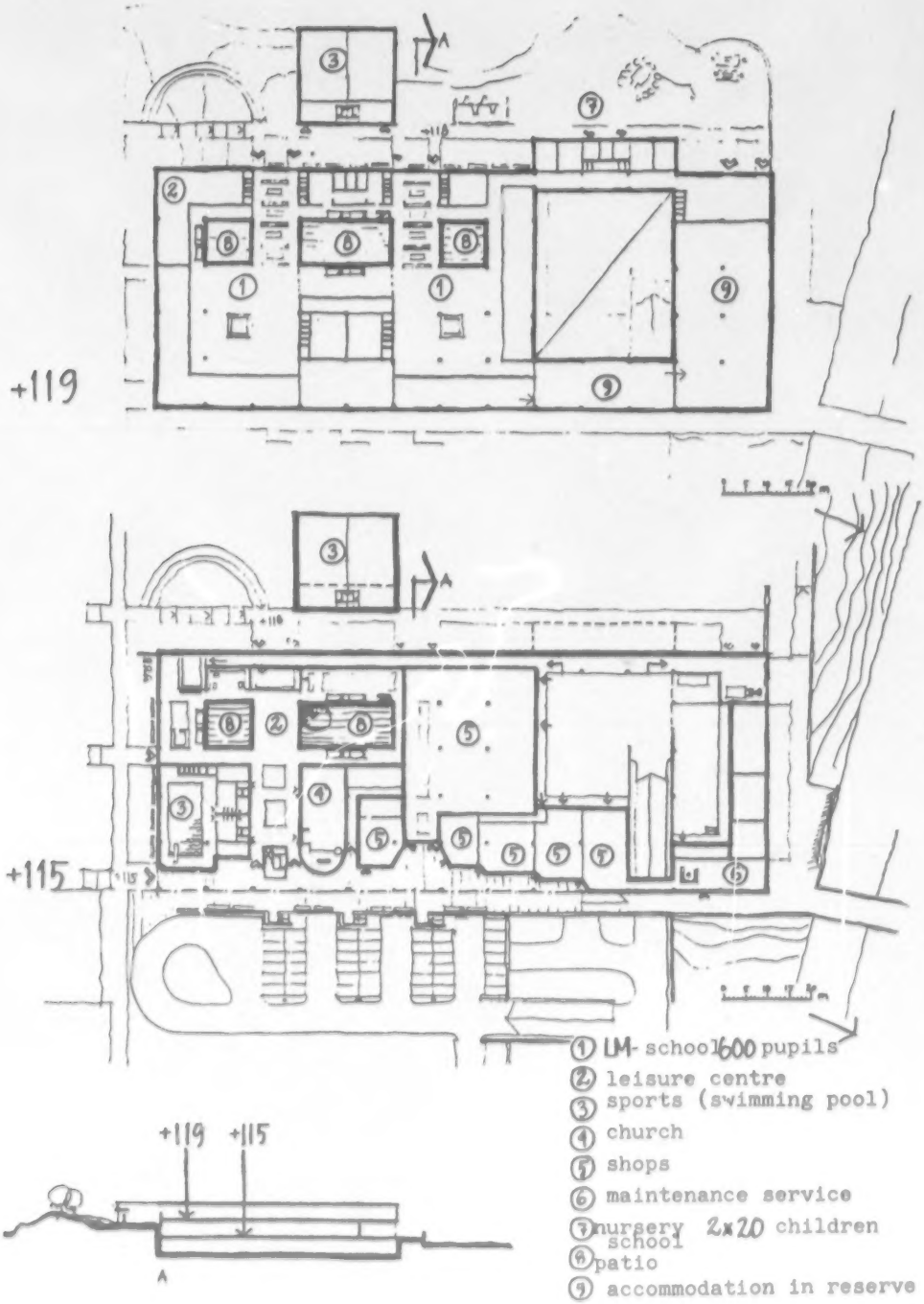
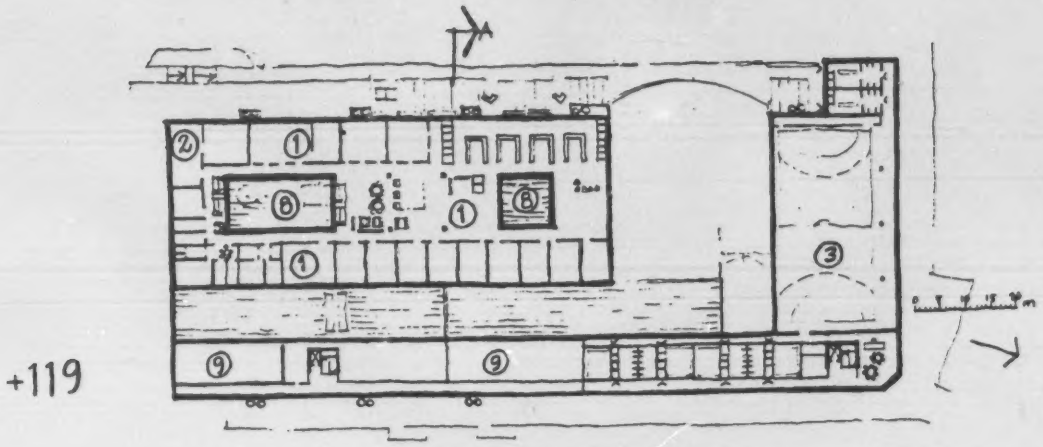
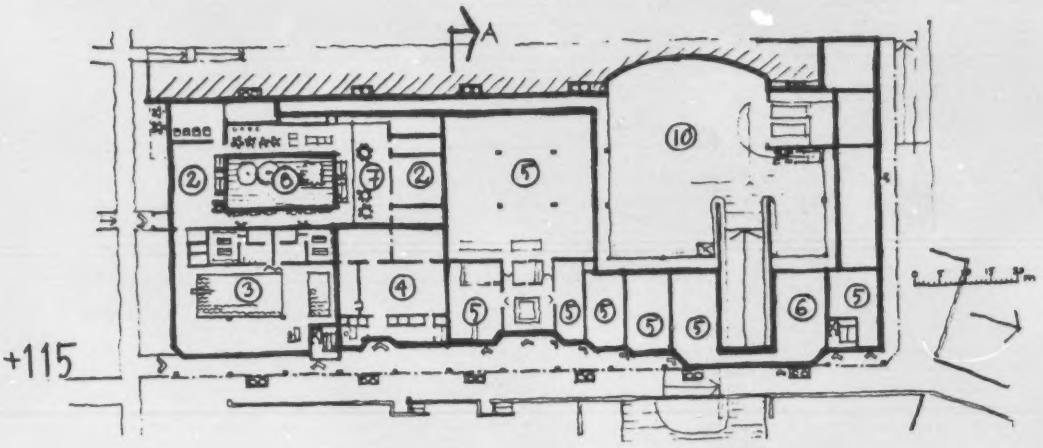
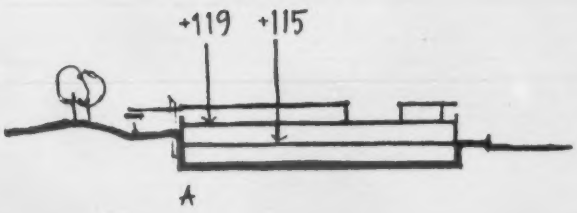


Figure 10 CENTRUM PHASE 2

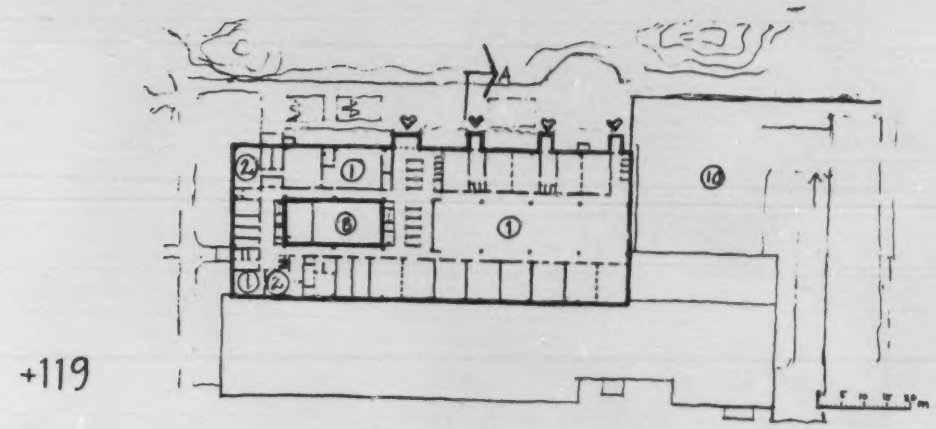


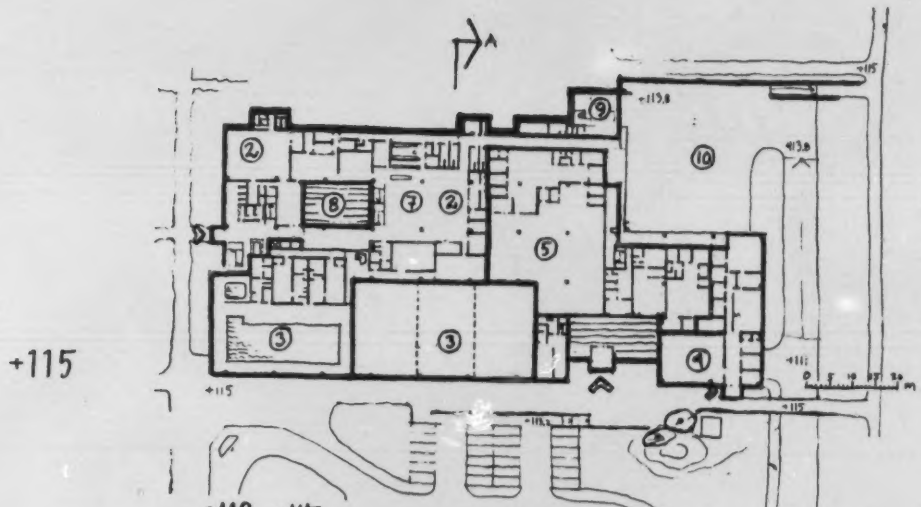


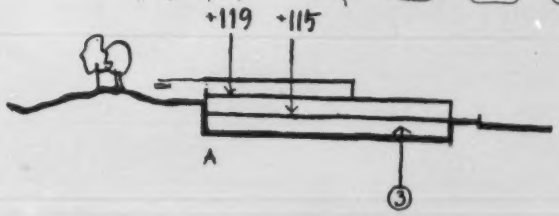


① LM-school 400 pupils
② leisure centre
③ sports (sports hall, swimming pool)
④ church
⑤ shops
⑥ maintenance service
⑦ dining facilities (school)
⑧ patio
⑨ accommodation in reserve
⑩ delivery area

Figure 11 CENTRUM PHASE 3





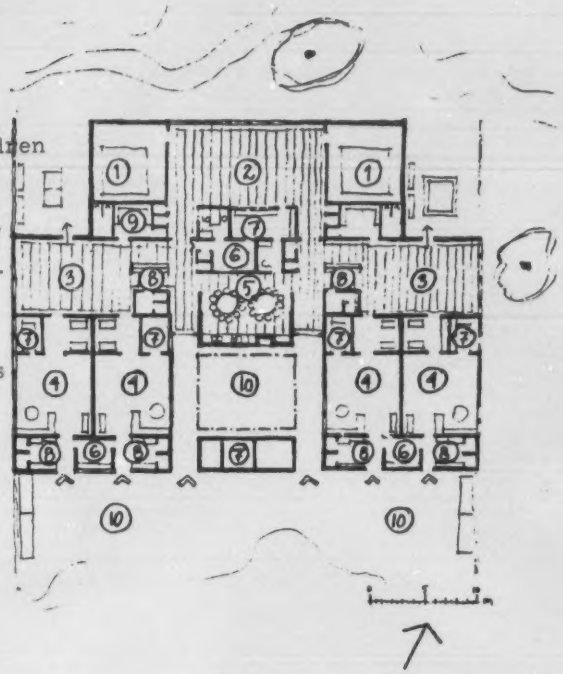


① LM- school 400 pupils
② leisure centre
③ sports (sports hall, swimming pool)
④ church
⑤ shops
⑥ maintenance service (outside the Centrum)
⑦ dining facilities (school)
⑧ patio
⑨ ancillary accommodation
⑩ delivery area

Figure 12 COMBINED NURSERY AND LOWER LEVEL PRIMARY SCHOOL

a) PHASE 2

① classroom 25 children
② study hall 25-50 children
③ joint activity area: play, dance/rythm, drama, story-telling, arts, crafts
④ nursery school 20 children
⑤ joint dining room
⑥ teachers/educationists
⑦ storage and ancillaries
⑧ cloakroom, WC
⑨ changing room
⑩ joint courtyard and playground



b) PHASE 3

① classroom 25 children
② gymnastics room
③ joint activity area
④ nursery school 20 children
⑤ dining room provisionally accommodated in 3, meals will later be served in the Centrum school
⑥ teachers/educationists
⑦ storage and ancillaries
⑧ cloakroom, WC
⑨ changing room
⑩ separate courtyards

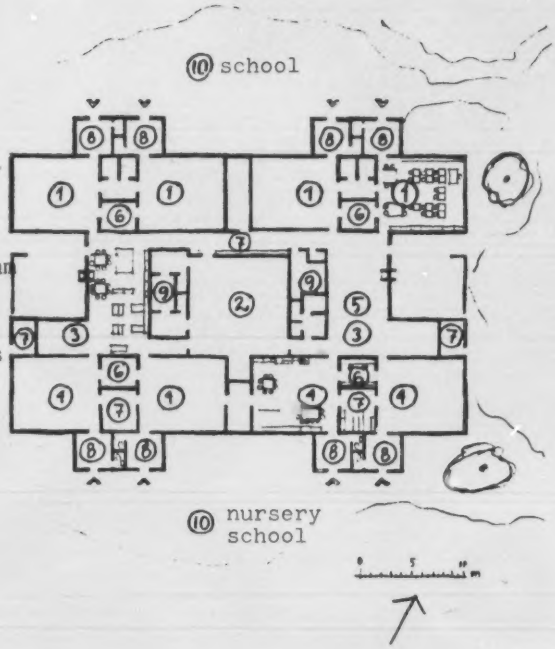


Figure 13 PROGRAMME CHANGES

PHASES 2 AND 3

A: In the Centrum		Observations
LM-school	phase 2 2750m² phase 3 2965m²	patio transformed into teaching area; adjustments to position along façade
leisure	690m² + 1030m²	assembly hall and gallery added; extension of the caféteria
sports	2440m² + 2530m²	physical training hall and storage facilities extended
church	530m² 500m²	modification of programme
shops	1580m² − 1300m²	bank and tea shop eliminated
maintenance service	− 0m²	housing maintenance service located in a residential block, area reduced

B: Outside the Centrum		
L-school	590m² 450m²	plan solution of phase 2 modified (see figure 12)
nursery school		
day nursery	1530m²	no change
home cottages	260m²	no change
leisure cottages	−	integrated
park play	2x 250m²	no change

The Combined Nursery and Lower Level Primary School

35. From Figure 12a) it can be deduced that in phase 2 the organisation outlined expressed what was sought to be educationally appropriate - a joint facility with a common entrance and play area, a common dining room and areas for educational co-operation. The plans were gradually modified so that in phase 3 /Figure 12b)7 the school and the nursery school got separate rooms, entrances and play grounds. The common part consists of the areas in the middle which include space for play and gymnastics. In this way, the teachers preserved their freedom to try out different forms of co-operation without being restricted by the design solutions.

Change in Facilities Programme

36. Finally, Figure 13 shows the change that occurred in the facilities programme between phase 2 and phase 3. Comments on these changes are contained in the Figure. Decisive factors were the detailed programme revisions made at design stage combined with technical and economic considerations.

FINANCING

37. From the start, the financing of the project was a prime question. The new regulations for loans for this type of project, which were a result of the work of the state commission on services, can be considered a prerequisite for the implementation of the project. The traditional form of financing, in which each sector of activity took responsibility for its own investments, would probably have meant serious delays, and a co-ordinated programme would have been very difficult to implement, as would co-operation between activities once the buildings were ready.

38. Financial responsibility for public services in Sweden rests largely with the municipalities. In Göteborg, as in the majority of municipalities, each department or board is responsible for planning, building and operating facilities in its own sphere of responsibility. The size of the facilities is weighted against the municipality's total resources in connection with the planning of investments when priorities are set between the building needs of the various departments. For certain types of facilities (e.g. school, nursery school) state loans and state subsidies are granted. A condition for these grants is that the facilities are built in accordance with the norms laid down by the central authorities. This state participation entails direct contact between municipal departments and their state counterparts. It also means that the

municipal authorities, who are responsible for financing the facilities, cannot just decide when a facility is to be built, as this is dependent upon when the state authorities will grant the subsidy. This has made co-ordination of facilities extremely difficult since there has been no co-ordination of the state subsidies and loans.

39. The state commission on services which, as mentioned earlier, was appointed by the government in 1967 to investigate services provision in residential areas, presented its second report in 1970, which contained a proposal for new financing procedures. The commission wanted the financing system to provide scope for co-ordination by reducing the number of authorities granting loans and subsidies. State support ought to aim at stimulating as far as possible general purpose facilities and joint use. The target aimed at was that supplementary housing services and other facilities which form part of the living environment should be given as much importance as the dwellings themselves and be included in similar planning and control processes.

40. As a result of the commission's work Parliament adopted new regulations for the granting of loans for service facilities on 26th May, 1972. The modification meant that state housing loans can be granted - not only for housing - but also for supplementary facilities. A general condition is that the purpose of these facilities is to provide residents in a housing area with goods or services. Thus a facility is not eligible for a loan if it serves an area considerably larger than the immediate neighbourhood. A state housing loan can be granted for integrated school facilities, provided the latter both in terms of location and co-ordination form an integrated part of a complex servicing a residential area and that the school facilities contribute to reducing considerably the need for other accommodation. The size of the housing loans is so decided as to constitute a certain percentage of a loan basis specially determined by state authorities. This is calculated by considering cost of land, unit costs for floor area, length of outer walls, heating and ventilation installations, etc. Interest is payable on housing loans according to a rate determined by the government for a year at a time.

41. State housing loans for a project of the Rannebergen type constitute a relatively small proportion of total loans. In terms of interest rates and amortisation the loan is not much more advantageous than other loans. The main advantage in obtaining state housing loans for the building of service facilities lies in the fact that both building credits and housing loans (see below) are guaranteed for the project under the agreement made between the credit institutions and the state delegation for the financing

of housing. Projects granted state housing loans are automatically given priority on the credit market and a further advantage is that loans for municipal facilities can now be co-ordinated. The granting of credits to the housing sector can be made by a number of institutions on the credit market and the forms for granting loans vary. There is a difference between building credits and housing loans. The building credit is a free loan to cover costs during the construction period and is replaced by a housing loan when the building is completed. Housing loans are divided into mortgage loans, state housing loans and top loans. Top loans have a higher interest rate and shorter amortisation time than the mortgage loans.

42. As regards Rannebergen it should be pointed out that the planning of the integrated centre began before the new financing procedures for this type of project had been decided by Parliament. The needs for new forms of financing had already been stressed in the first report of the state commission on services (1968). The Brickebacken project in Örebro and Lövgärdet in Göteborg, the planning of which started somewhat earlier than that of Rannebergen, became pilot projects in order that the state commission would have a concrete basis on which to establish rules for the financing and organisation of integrated facilities. During 1971-72 an exceptional rule was applied for financing integrated service facilities. This possibility was used first for Brickebacken, then for Lövgärdet and subsequently for seven other projects, amongst them Rannebergen.

43. GSB has been responsible for the development of Rannebergen - the housing as well as various service facilities. It is therefore formerly the owner of everything built in Rannebergen (with the exception of the combined nursery and primary school, streets and circuits outside the ring of housing blocks). The land which belongs to the municipality has been made available to the building society by site leasehold. The production costs for providing the facilities in Rannebergen and the method of financing can be seen from Table 3.

STUDY OF NEEDS

44. No real studies of needs and demands were made in connection with the planning of the project. The needs were gauged by each department on the basis of previous experience and after discussions in the working group.

Table 3

RANNEBERGEN: COST OF CERTAIN SERVICE FACILITIES
(in thousands of 1975 Sw. Kronor)

Facility	Building Cost	Financing				Municipal Costs for Furniture and Equipment (direct financing by the municipality)
		State Subsidies	State Housing Loans	Loans taken by GSB in Various Credit Institutions	Direct Financing by the Municipality	
Rannebergen Centrum	24 690(1)	1 471(2) (school)	1 619	21 600	-	1 985 school, sports hall, swimming pool, leisure centre
Day nursery, 64 places	1 590	864(3)	208	518	-	150
Day nursery, 50 places	1 204	285(3)	200	719	-	100
Leisure home ("home" cottage)	428	75(3)	89	264	-	50
Nursery and lower primary school (southern part)	2 120	250(2)			1 870	185
Park play cottage (southern part)	385		78	307		25
Park play cottage (northern part)	461		117	344		25

1) According to GSB it has not been possible to produce a detailed breakdown of costs. A breakdown according to the distribution made of floor area between the various partners - on the assumption that all facilities cost the same per m^2 - gives the following results: school - 8 690; leisure centre - 3 050; sports hall/swimming pool - 7 500; church - 1 600; shops/post office - 3 850.

2) The size of the state subsidy is determined on the basis of the net floor area established by the state authorities (1 935 m^2).

3) State subsidies to day nurseries and leisure homes consist of a lump sum per place. This lump sum had been considerably increased when the second day nursery (64 places) was built.

OPERATION AND DESIGN

45. No operational model was developed in connection with the elaboration of the project. At this stage the departments had merely an unformulated opinion about the future operation founded on earlier experience acquired in the limited co-ordination which had taken place in other schools. Each department tended to consider its own resources as they had been used in non-integrated facilities and to study the problems that co-ordination would entail from that viewpoint. A less negative model however, which was never formalised, was introduced by the architects, who could refer to the integrated facilities project at Brickebacken and who also elaborated certain functional relationships based on obvious assumptions about co-ordination. The functional or operational relationships were further developed by a formally appointed working group at a time when construction was under way and the building almost completed (paragraph 73). The operational model elaborated has, therefore, had no real impact on the design of Rannebergen. It will, however, be an asset in the planning and design of future projects.

LISTING OF AREAS PROVIDED FOR THE SCHOOL AND THE LEISURE CENTRE

46. Table 4 compares the areas contained in the initial programmes which the education and social affairs departments submitted for the school and the leisure centre at the early planning stage, with those actually designed. The areas concern net floor area i.e. excluding circulation, cloakrooms, toilets, cleaning stores, changing rooms, etc., and as far as the school is concerned comply with the norms issued by the National Board of Education. These norms state in detail the rooms and areas that must be provided in a school of a certain size. A condition for the granting of the state subsidy is that the norms are adhered to. It is possible, however, as was done in the Centrum to extend the school dining-room for leisure activities, for example, or to allow the school gymnasium to be incorporated into a sports hall, but in such cases a separate decision by the Municipal Council is required if the floor area of the school (according to the established programme) is to be approved for the obtention of the state subsidy. With regard to the sports facilities - with the exception of the school gymnasium - and the remaining facilities in the Centrum, there were no detailed programmes at the outset which would allow a subsequent comparison of planned and actually designed areas. These facilities developed gradually in the course of the design by the architects.

Table 4

COMPARISON OF PLANNED AND ACTUALLY DESIGNED AREAS
IN RESPECT OF THE SCHOOL AND THE LEISURE CENTRE

Type of Facility	Planned Area		Designed Area		Observations
	School	Leisure Centre	School	Leisure Centre	
Administration	20	30	26	25	
Staff	37	10	66		Common
Care of pupils (medical service, special education)	61		81		
Teaching areas	1 159		1 185		
Craft workshops	177		191	44(1)	1) 3 stores
Hobby activities		50		13	Unit for hobby activities next to dining room
Gymnasium	160		160		The area has been integrated into the sports hall (830 m^2)
Changing rooms, staff room	63	30(2)	63	30(2)	2) Sauna. The area is included in the changing room area for the sports hall
School dining room	195		320		The dining room is also to serve the two combined, nursery and primary schools, one of which has been built so far
Common room next to dining room			80		Common
Staff dining room	23		22		
Kitchen (next to dining room)	40		46	46	
"Flat"/clubroom		90		90	
Clubrooms of 30m^2 each		60		50	
Meeting room with kitchenette				157	
Gallery				55	
Caféteria with kitchen		90		92	
Stores(3)		180		100	3) Not included in the school's programme.
Total	1 935	540	2 942		
	2 475				

47. Besides the scheduled area of 540 m2, circulation areas amounting to 165 m2 were added for the leisure centre. The programme assumed that a co-ordination would be made with the facilities of the school. The total area required for a traditional leisure centre was stated to be 1 200 m2. The idea behind the programme and the final solution was to provide separate base facilities for each field of activity while other facilities were to be used jointly. As can be seen from Table 4 the total area of the leisure centre has been extended in relation to the initial programme, from which the conclusion can be drawn that co-ordination did not bring about the saving that had been expected, or, alternatively, that a higher standard has been achieved than that normally provided for this type of facility.

Part Three

COMPOSITION OF THE CENTRUM

GENERAL DESCRIPTION

48. The building consists of three storeys and is designed to receive physically handicapped people which implies that wheel-chairs can easily get into the building and move from one floor to another (lift) and that special toilets for handicapped have been installed. In the basement there are parking places, air-raid shelters and the sports hall. On the ground floor in the northern part of the building the shops and the church are to be found. The rest of this floor is taken up by the reception, the leisure facilities, the school dining room, the swimming pool and two physical training rooms. On the first floor are all the school classrooms and staff rooms and located in the south-west corner of the building certain rooms for leisure activities.

49. The total floor area of the Centrum (excluding external walls and partitions) is 8 325 m2. After discussions between GSB and the departments concerned, a breakdown of this area has been made primarily with a view to allow rental costs to be distributed and the areas of each partner have been indicated on the plans. They are as follows:

School	2 965 m2
Leisure centre	1 030 m2
Sports hall/swimming pool	2 530 m2
Church	500 m2
Shops, post office	1 200 m2

RELATIONS TO THE IMMEDIATE SURROUNDINGS

50. The Centrum lies within the circle formed by the apartment blocks. The furthest distance from any of the dwellings to the Centrum is approximately 400 metres, i.e. walking distance. Because the park is hilly, the Centrum cannot be seen, at ground level, from the southern part of the

district. As the whole residential area is relatively small, however, it should be easy for users and visitors to find their way to both the Centrum and to the various service institutions in the park. Furthermore, signs have been set up to guide users and visitors. The Centrum building is bordered on the south by the pedestrian pathways and playing fields in the park. To the west of the building there is an outdoor play area for the pupils and the school entrances are also to be found there. Because of the way the building has been built the pupils have direct access to the school premises from the outside. Within the Centrum building itself all rooms are easily accessible, with the exception of the caféteria which has a fairly hidden location inside the building. The caféteria, if it had been located towards the pedestrian pathway, could have contributed to "entice" people into the building.

COMMENTS ON THE DESIGN

51. The comments deal in the first instance with the way certain school and leisure centre facilities have been equipped and are used.

The First Floor

52. The school classrooms are not especially designed or fitted to comply with requirements other than those of the school. In principle the facilities are similar to those in open plan schools built in Göteborg during the last few years. The furniture has been selected from the "furniture bank" set up by the Education Department in 1969. Furniture and equipment do not, therefore, differ from those to be found in other schools in the municipality.

53. The open study hall is extremely well soundproofed with sound absorbants in both ceiling and walls. The furniture in the study hall permits various groupings of pupils by movable blackboards and screens. In one part of the study hall there is a studio for art classes equipped with sinks and a large table. In the study hall there is also storage space for teaching material and for the school's library, as well as carrels for individual study such as language training with tape recorders. The school is still not filled to capacity, which means that each class at present has a classroom of its own. Because of this the study hall is not used to the extent nor in the manner intended when the school was planned. In the studio part, a course in silk painting for adults is held one evening a week but since neither furniture nor sinks are suited for adults working conditions are sometimes uncomfortable.

54. In the central cloakroom the floor cover consists of soft wall-to-wall carpets (needlefelt carpet) as in the study hall and classrooms. The central cloakroom has come to function as a common room for pupils during breaks. This is partly because the pupils seem to like being there and partly because the stairs leading down to the school dining room and to the leisure facilities are shut off for the pupils during school hours except when school lunch is being served. The stairs between the ground floor and the first floor are of steel and a disturbing noise is created when the pupils run up and down. This is why it has been considered necessary to shut off the stairs for the pupils, who therefore must go round the building on the outside to reach the leisure facilities. The pupils have, besides the lunch-break, when the inner communication to the dining room is open, a longer break of 20 minutes a day, plus a number of shorter breaks of 5-10 minutes. However, under present circumstances the pupils do not have the time to get to the leisure facilities during the shorter breaks. Apart from the problem of noise, there was, according to the school staff, yet another reason for closing this inner communication, namely the difficulites at the end of the breaks in gathering the pupils who had been down in the leisure facilities.

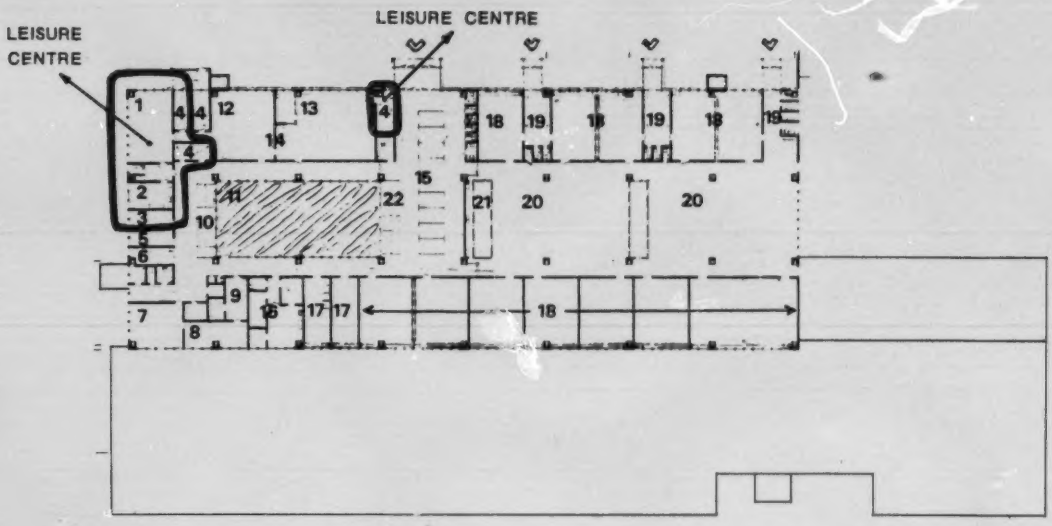
55. The craft facilities ("all-activity-workshops") correspond in terms of area and equipment to those in non-integrated schools. In Rannebergen two stores - one in each room - have been added so that the facilities can be used for leisure purposes. The facilities have furthermore been located in the building in such a way that they can be used for leisure activities also during school hours, which is the case at present on Mondays when the "all-activity-workshop" is open between 11 a.m. and 3 p.m. The shared use of the craft facilities functions well.

56. The caretaker's room is used by the school essentially to store materials since there is no special caretaker. This room forms part of the standard schedule of accommodation for this type of school laid down by the National Board of Education. The working group which in the spring of 1974 developed guidelines for the operation of the integrated centre (paragraph 73) proposed however a restructuring of the traditional function of school caretaker. This is now assumed by the service assistants or "animateurs" of the centre. This arrangement provides a certain continuity in the pupils' relations with adults since they also meet the service assistants in the evenings and at weekends.

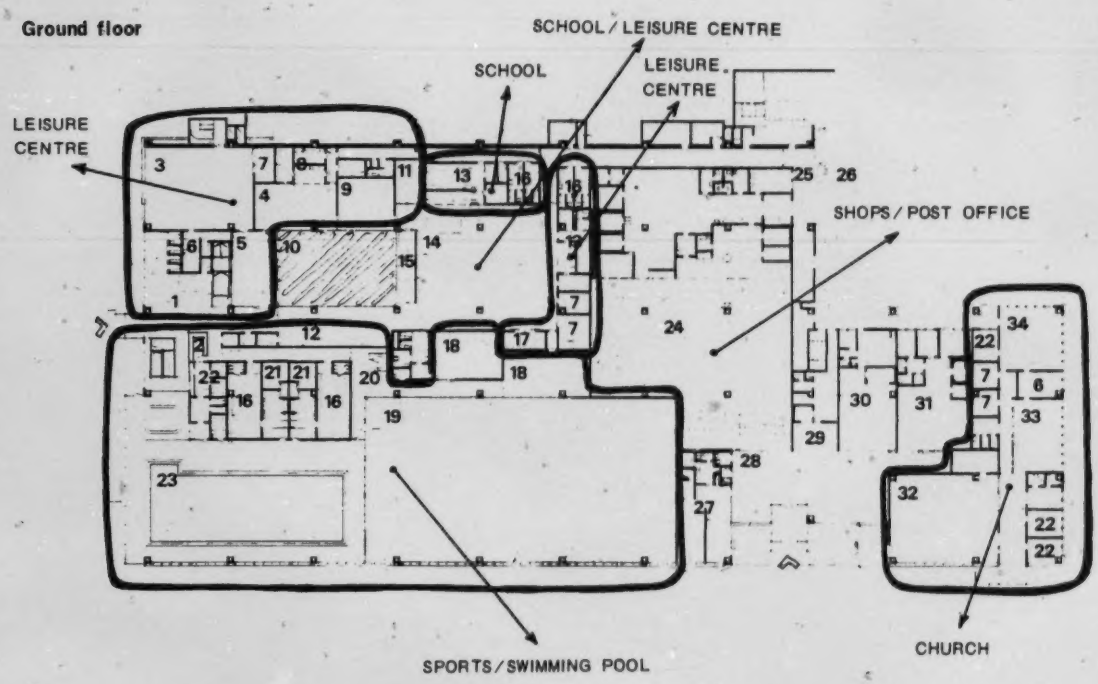
The Ground Floor

57. Initially, the staff dining room was not used as such but as a furniture store. Today however the staff takes its meals in this room. A

First floor

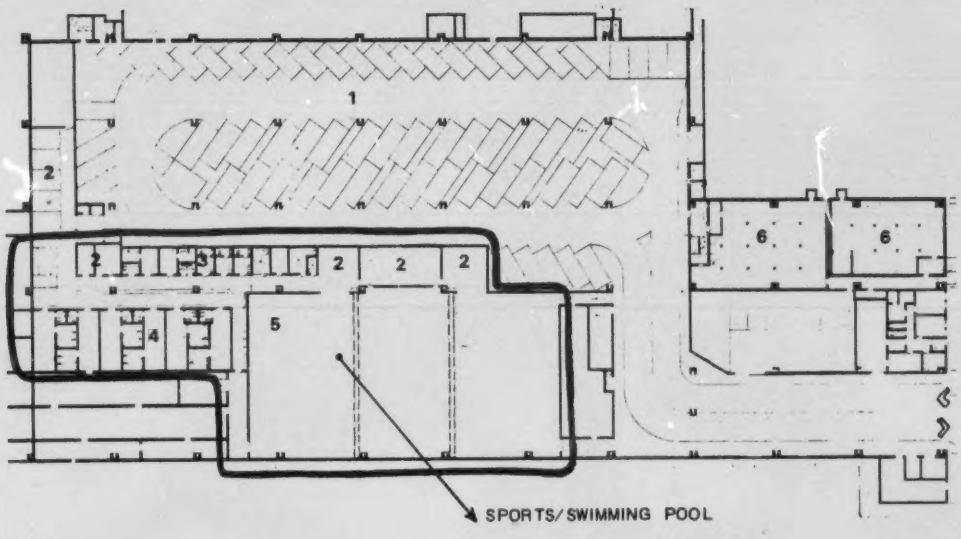


Ground floor



centrum

Basement



FIRST FLOOR

1. Clubroom
2. Kitchen
3. Leisure centre office
4. Store
5. Teacher in charge
6. Caretaker
7. Staff common room
8. Staff work area
9. Teaching materials
10. Staircase
11. Patio
12. Textiles
13. Wood and metal work
14. All-activity workshop
15. Central cloakroom
16. Medical service
17. Special education
18. Classrooms
19. Cloakroom
20. Study hall
21. Art studio
22. Staircase

GROUND FLOOR

1. Entrance hall
2. Reception
3. Meeting room
4. Cafeteria
5. Gallery
6. Kitchenette
7. Store
8. Kitchen
9. TV-room
10. Patio
11. Staff dining room
12. Common room
13. Kitchen
14. Dining hall
15. Staircase
16. Changing rooms
17. Kitchenette
18. Physical culture
19. Sports hall
20. Circulation/staircase
21. Sauna
22. Office
23. Swimming pool
24. Shops
25. Delivery platform
26. Delivery yard
27. Hairdresser
28. Covered square
29. Baker
30. "Everyday" shop
31. Post office
32. Church hall
33. Meeting room
34. Children's corner

BASEMENT

1. Garage
2. Store
3. Staff cloakrooms
4. Changing rooms
5. Sports hall
6. Air raid shelters

small billiards table has been placed there to allow use of the area in the afternoons and at night by those interested who can book the area in the reception.

58. The TV room no longer fulfills functions corresponding to its name, as the TV which was formerly there has been moved to the cafeteria. The reason for this was that the young people had expressed a wish to have a room of their own to listen to music, to use occasionally as a discothèque or just to sit and talk. The room which was originally painted in white has been repainted by themselves and the service assistants and re-furnished with softer and more comfortable furniture. The room is open in the evenings but closed during daytime because the teenagers do not want to let the pupils from the middle level "Grundskola" in "their" room. The room is regularly used by 15 to 20 teenagers in the evenings.

59. The transit room (common room) between the reception hall and the dining room, which has been furnished with solid benches and tables, is used during breaks by the pupils. The door between this room and the dining room is locked during lunch. The staff of the leisure centre has expressed the wish to move activities during breaks to the study hall since the leisure centre has no wet area for activities with colours, clay, etc. A better contact would then also be established with the school. At the same time, this would mean being closer to the schoolyard which could then be better used for activities during breaks.

60. Of the two physical training halls, one is meant for strength and condition training (test bicycle, disc bar, etc.). The other has no equipment at all except for a mirror covering the whole of one wall. This room is used essentially for ballet dancing.

The Basement

61. With its shutter-walls the sports hall can be divided into three parts to enable different activities to take place at the same time. For example, the school can use two-thirds of the hall for gymnastics while light (or Swedish) gymnastics for retired people is taking place in the other third.

EXAMPLE OF FACILITIES EQUIPPED AND DESIGNED FOR MULTIPLE USE

Dining room with Kitchens

62. The part of the dining facilities included in the schedule of accommodation of the school covers 195 m2. Due to the co-ordination with the

Entrance hall and reception. To the right lift for handicapped

Exhibition organised by the police in the gallery

"Sewing cottage"

leisure centre it has been extended to 320m2. The dining room is not used to any greater extent during daytime except for school lunches and is closed to the public. In the evenings and on Saturdays and Sundays, it is used as a discothèque , for dance courses, for class fêtes and family activities. Every Sunday there is an event called "Sunday gatherings" or "time for play" organised by the leisure centre in conjunction with various associations or clubs. The "Sunday gathering" addresses itself to families and may for example comprise a show, dancing, games or a presentation by various associations of their activities. The dining room is also used for more important events, e.g. the bazaars of the parents' association. A travel club created within the leisure centre has organised auctions to finance its activities, i.e. to travel; a trip has recently been made to the Netherlands. The police has run an exhibition and a traffic school. Even if used fairly sporadically the dining room is a great asset to the district since it is the only large hall in the neighbourhood capable of accommodating larger events. For activities with few participants however it is too big and gives a somewhat desolate impression. The room could have been used more extensively had it been possible to divide it up at certain occasions.

63. According to the staff of the leisure centre there is a general lack of small rooms in service centres of this kind. At the same time they feel it would have been a pity if the dining room had been split into several smaller rooms which shows that this type of large assembly hall is highly appreciated. The dining room operates in principle according to the intentions expressed at planning and design stage. No particular problems have arisen in its use with the exception of disturbances from noise when the stairs from the first floor to the dining room are used at the same time as activities are going on in the dining room.

64. The dining room has two kitchens, one for the school and one for leisure activities. The two kitchens are equipped differently to be able to meet different needs. The school kitchen is used on average 4½ hours per day and is fitted to receive deep-frozen ready-made food which is heated in hot air ovens. The meals are served on disposable plates and the pupils fetch their meal at a self-service counter. The kitchen of the leisure centre is mainly used in the evenings and on Saturdays and Sundays when the dining room is used for various leisure activities. At this occasion the cafeteria is closed and serving takes place in the dining room. The cafeteria is under lease. The present lessee has however denounced the lease contract. It has proved difficult to run the cafeteria on a commercial basis and conflicts have arisen with the leisure centre when a clash of interests have occured between the latter's activities and the commercial

interests. If, for example, the school or the associations wish to organise events in the dining room and want themselves to handle the sale of refreshments to keep prices down, the lessee reacts negatively. The leisure centre is continuously obliged to make allowance for the cafeteria. There is also a third kitchen adjacent to the dining room equipped with two cookers and a sink and intended for hobby activities - baking, easy cooking, etc. - but so far it has hardly been used.

Small Assembly Hall

65. This hall covers an area of 150m2 and has no fixed furniture. Its design and the way it is fitted out are meant to provide opportunities for multiple use. There is a small kitchenette next to it as well as a store for furniture and a cubicle for a film projector. It has proved possible to use the hall for a variety of activities which corresponds to the initial design intentions. Some examples can be given. Ping-pong tables on wheels that can be folded and moved easily are generally put up during daytime and are used by pupils during breaks. Also in the evening the hall is used for table tennis, at present two nights a week under auspices of the table tennis club. This club, like others which are using the leisure centre for their activities, gets economic support from the municipality. Its activity is open, i.e. anyone can take part. The reason why the table tennis club uses the assembly hall and not the sports hall is simply that the latter is overbooked. The hall has proved suitable for this type of activity except for the ventilation which was not foreseen for physical activities and is thus somewhat insufficient. This is however not a major problem.

66. The assembly hall is also used for film projections and as a theatre. There are film performances twice a week both for adults and children. When the hall is used for a theatrical performance, which happens once or twice per term a movable scene is set up. The performances are given by various theatres or drama associations, i.e. both by professionals and amateurs. Either a symbolic entrance fee is charged or the performances are entirely free of charge.

67. The Rannebergen association of retired people previously ran its activities in the clubroom on the first floor but has now moved its activities to the assembly hall with its kitchenette, and at present the association has the use of the hall one morning a week. The reason for this change is that the facilities of the leisure home has had to be used increasingly for leisure activities. Gradually the assembly hall which originally was extremely bare and painted in white, has been repainted and

DIFFERENT USES OF DINING ROOM

School lunch

"Sunday gathering" attracting all generations

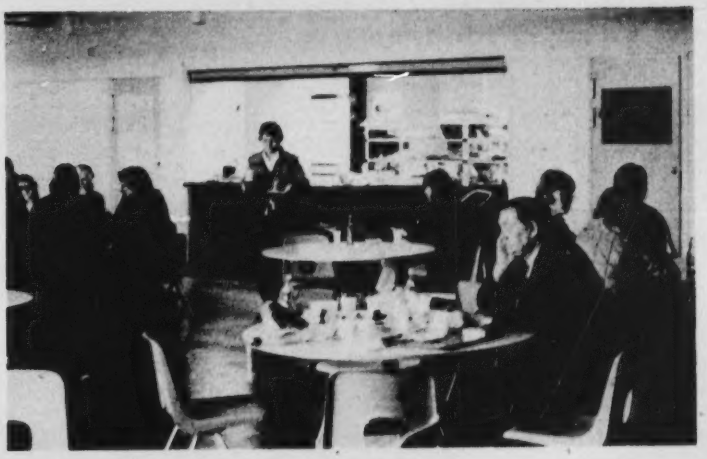


Table tennis tournament

textiles have been added, e.g. there is now a tapestry covering a whole wall. This has made the room more attractive for the type of gatherings that the retired people arrange with coffee-drinking etc.

68. The school uses the hall for general assemblies, school theatre, film projections, prize-giving at the end of the school term etc; but this use is as yet fairly limited probably because the school is not at present running to full capacity and that consequently some of these activities can now be held in the study hall. The assembly hall is also used as a discothèque, for dance courses, and more generally for association activities.

The clubroom with its own kitchen, previously used by the association of retired people

Part Four

USE OF RESOURCES

CAPACITY AND USE

69. As an introduction to this part a table has been compiled showing all existing service facilities in Rannebergen, their capacity and to which extent they were used in the autumn of 1975 (Table 5). Figure 14 provides data on the number of pupils enrolled in grades 1-6 in the autumn of 1975 and also indicates the capacity of the schools.

JOINT AND SHARED USE

Shared Use

70. When the Centrum was planned one of the objectives was to provide separate base facilities for the different activities as well as certain facilities intended for joint or shared use. A majority of the facilities in the Centrum are intended for given institutions (e.g. school, leisure) or for a given category of users, even though the facilities are in part made available to others. According to the definition made by the OECD Programme on Educational Building these facilities can be referred to the category "shared use".

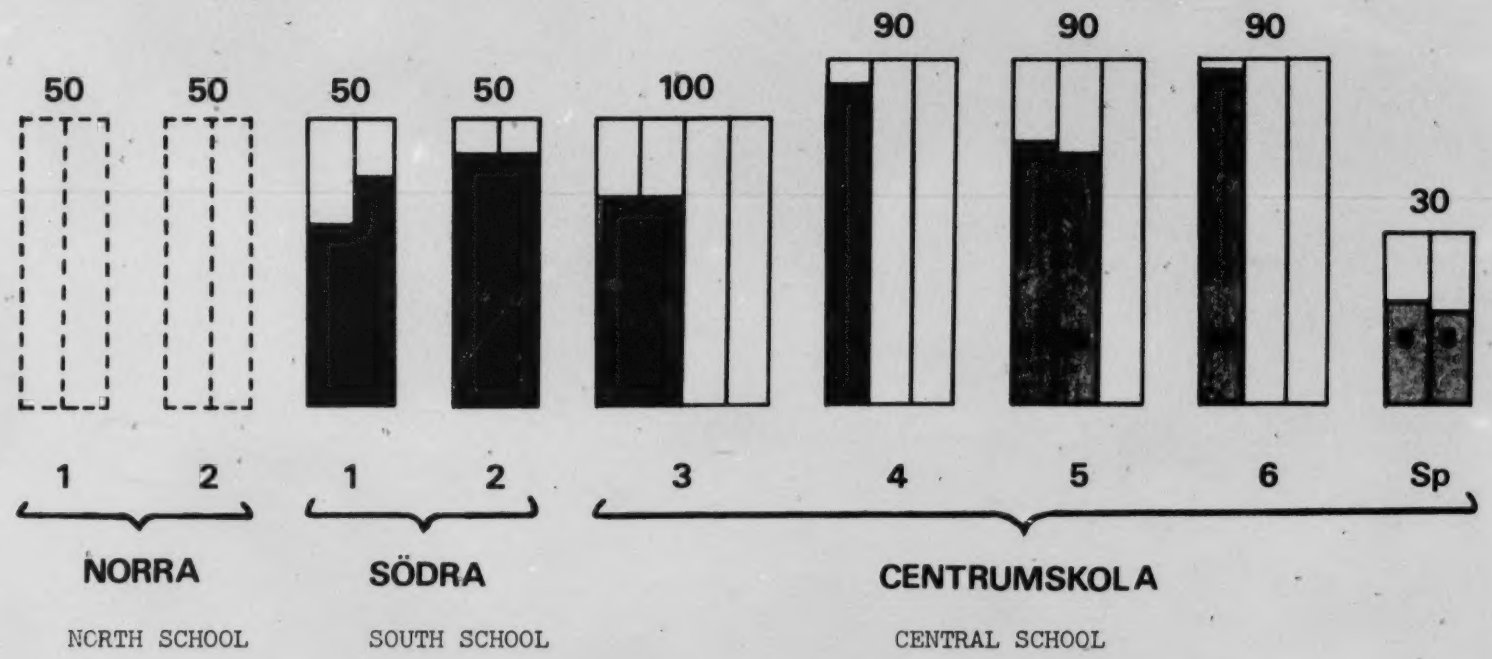
71. The school facilities are primarily intended and designed to meet the needs of the school. Classrooms and the study hall are used to a very limited extent in the evenings for adult education. The reason is probably that the demand for the type of activity that can take place in these facilities is very small. When the crafts facilities are not needed by the school, the leisure centre uses them as an "all-activity-workshop". In principle school pupils have access to all the facilities of the leisure centre during the day time. Several are used for various activities and by different categories of users, but not at the same time. The following are examples of activities in some of the facilities of the leisure centre.

Table 5

CAPACITY AND USE OF THE SERVICES FACILITIES IN RANNEBERGEN IN THE AUTUMN OF 1975

Facility	Floor area in m^2	Capacity	Use
In the Centrum:			
School	2 965	15 LM classes (7-12 years) = 400 pupils	8 classes = 155 pupils
Leisure centre	1 030		100-200 visitors/day, Monday-Friday: 8 a.m.-10 p.m. Saturday-Sunday: 8 a.m.-4 p.m.
Sports hall	2 530	abt. 1 000 visitors/week	60-65 hours/week Monday-Friday: 8 a.m.-10 p.m. Saturday-Sunday: 8 a.m.-4 p.m.
Swimming pool			Approx. 400 visitors/week Monday-Friday: 8 a.m.- 8 p.m.
Outside the Centrum:			
Day nursery/ leisure home	666	3 sections 1.5-7 years, 35 places 1 section 7-10 years, 15 places	Day nursery: 43 children Leisure home: 18 children Monday-Friday: 6.30 a.m.-6.30 p.m.
Day nursery	821	5 sections 0.5-7 years, 60 places	61 children Monday-Friday: 6.30 a.m.-6.30 p.m.
Leisure home ("home" cottage)	261	1 section, 15 places	18 children Monday-Friday: 6.30 a.m.-6.30 p.m.
Combined nursery and lower primary school	1 140	4 classes L-level = 100 places 4 nursery school groups = 80 places	4 classes L-level = 80 pupils Monday-Friday: 8 a.m -2 p.m. 3 nursery school groups = 60 pupils Monday-Friday: 8.30 a.m.-12.30 p.m.
Park play - Cottage 1	176	approx. 30 children (4-12 years) together	60 visitors/day Monday-Friday: 9 a.m.-5 p.m.
Park play - Cottage 2	176	approx. 30 children (4-12 years) together	40 visitors/day Monday-Friday 11 a.m.-3 p.m.

Figure 14 CAPACITY OF SCHOOLS AND PUPILS ENROLLED IN THE AUTUMN OF 1975



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Assembly hall:	table tennis, film, theatre, activities for retired people, meetings
Club room:	hobby activities for retired people, church services, activities of associations, meetings
Gallery:	table tennis, exhibitions

Joint Use

72. The term "joint use" is used to designate facilities that are not intended for just one institution or category of users. Examples of such facilities are the dining room and the sports hall. As mentioned earlier the dining room is extended to meet the needs other than those of the school. The sports hall, which came into existence through the extension of the school gymnasium, is used more or less solely for various types of sports. If the activity being practised does not demand the whole area, it is possible for different categories of users to occupy the hall simutaneously, as it can be divided into two or three parts by shutter-walls.

ORGANISATION OF ACTIVITIES AND OPERATION

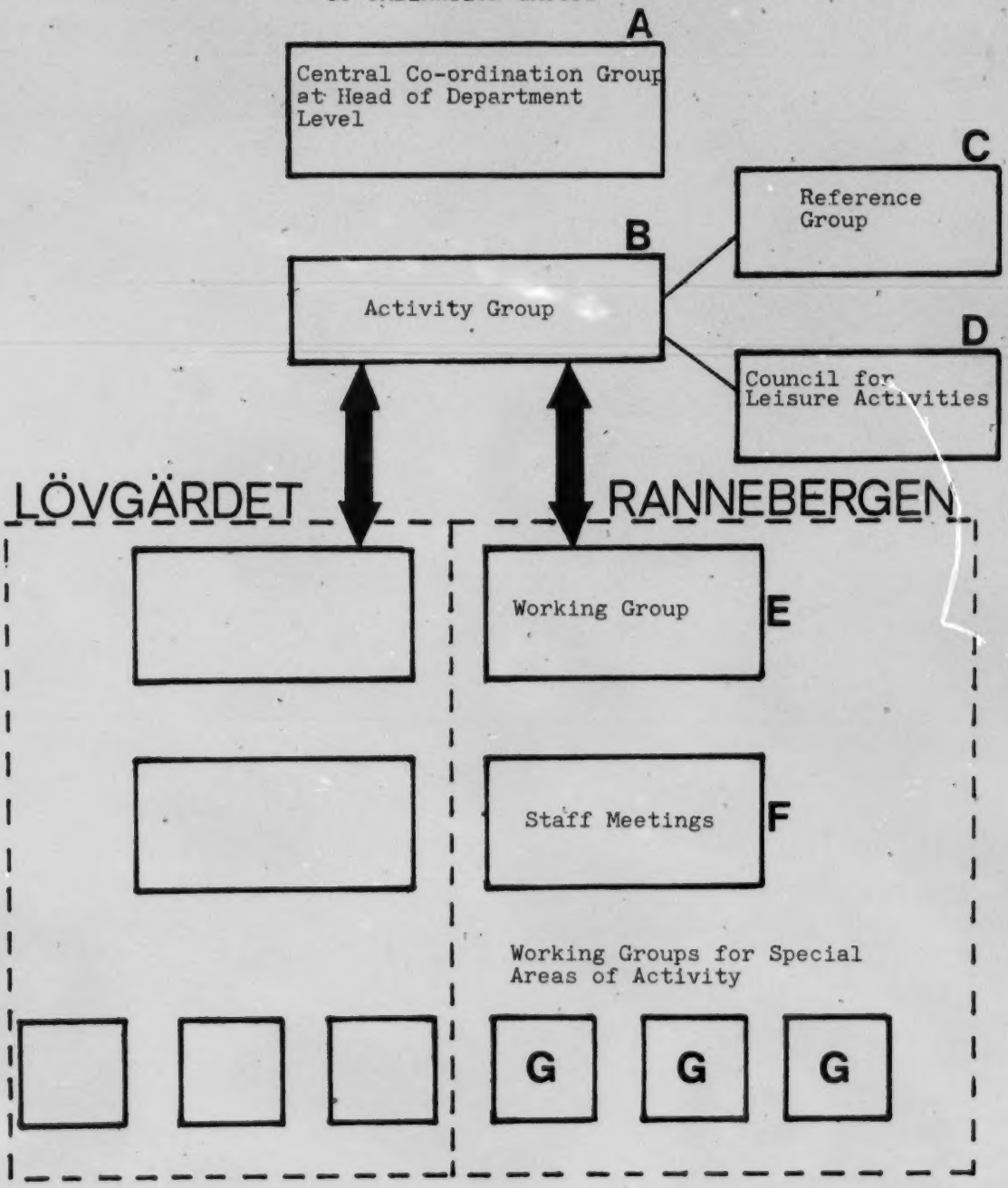
73. Following a decision by the Municipality a working group was set up in the spring of 1974 by the Bureaus of the Education, Social Affairs, Library, Sports and Road Boards, to investigate certain questions in relation to the operation of the integrated facilities in Lövgärdet and Rannebergen, such as breakdown of areas and costs, rules and guidelines for the running of activities, form and contents of activities, etc. The working group, which presented its report in May, 1974, was comprised of representatives, at head of department level, from the departments concerned. The guidelines drawn up in this report are still valid.

Management and Co-ordination Functions

74. For the integrated facilities in Lövgärdet and Rannebergen, the school parts of which belong to the school district of Lövgärdet (the head of which has his main quarters in the school at Lövgärdet) a common organisation for management and co-ordination between the parties concerned has been established (see Figure 15).

A. The co-ordination group deals with questions referred to it from the activity group and ensures that the activities in the centres are carried out in accordance with the intentions of the Municipality.

Figure 15 ORGANISATIONAL DIAGRAM FOR MANAGEMENT AND CO-ORDINATION GROUPS



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The Education, Social Affairs, Leisure and Library Departments are represented on the co-ordination group.

B. The activity group has the direct responsibility for the development and evaluation of on-going activities. The group meets every second month and consists of the senior officials or advisers from the departments concerned who are particularly responsible for activities in the school district, the head of which calls the meetings.

C. When necessary the activity group consults a reference group consisting of other interested parties at local level. This group includes representatives from the library service, parents' and teachers' association, police, church, trade, non-profit making associations, etc.

D. A council for leisure activities has been created in Rannebergen and will also be set up in Lövgärdet. The Rannebergen Council comprises representatives of the associations active within the district and of those municipal institutions which offer leisure activities.

E. The local working group in Rannebergen consists of two representatives from the school (teachers) and one each from the leisure centre, the park play, the social service, the swimming pool and the day nurseries. The group, which meets approximately once a month has as its main task to suggest how existing facilities and staff can best be used and to plan common leisure activities, etc.

F. The school staff at Rannebergen, just as the leisure staff, have a staff meeting about once a week. Minutes from these meetings are exchanged between the two. If questions which concern leisure activities are to be discussed at the school staff meeting representatives from the leisure centre are called to the meeting. The same applies to leisure staff meetings.

G. Working groups for special areas of activity, e.g.

- hobby activities and courses (leisure staff)
- sports and games (leisure staff)
- society and information (school and leisure staff)
- dance, music, theatre (leisure staff)
- activities during breaks (school and leisure staff).

Rules for Registration and Booking of Facilities

75. In accordance with the conditions governing the integration of school and leisure activities, each department has the right to use all the facilities in the centre. Possible priorities are determined by the activity

group and in setting these due consideration should be given to the fact that school activities according to the educational law and curriculum shall be given priority. Booking of facilities is done through the service assistants who keep a register and make notes in a ledger. An exception to this rule of free use is the sports hall and swimming pool. The school is debited by the leisure department for the hours used in the sports hall. When using the swimming pool the school pays a fee for each pupil.

76. Letting of leisure facilities to outsiders (associations, private persons) is done through the leisure department's letting office which is centrally situated in the municipality. The letting-office checks with the service assistants whether the actual facilities are free and if so gives its consent. The service assistants at the reception desk give a postal order to those who have rented the facilities and send a note to the letting office confirming that the facility in question has been used. With regard to the pool and physical training rooms, the users pay fees to the service assistants at the reception desk. Letting of the school facilities to outsiders is done through the service assistants after consultation with the headmaster. The headmaster reports each month to the Education Department on the extent to which facilities have been let and invoices are then sent out by the Department.

Rental Conditions, Maintenance and Operation

77. A final rent agreement between Bostadsbolaget (GSB) and the departments has not yet been signed and the departments are at present paying a preliminary rent. Negotiations are taking place regarding the final contracts to be drawn up between GSB and each of the departments. The rental costs are to be based on the real production cost of the building and be divided between the parties concerned in relation to the area which after consultation, it has been agreed that each party has at his disposal. With regard to the area of the school (2 965 m2), the principle in determining this area was that it should correspond to the area of a traditional school with the same organisation. When calculating the rent for the school the state subsidy, granted to the municipality and credited to GSB, is deduced from the production cost.

78. The proposed rent agreement for the school between GSB and the Education Department includes the following items:

Length of contract : 25 years
Costs for heating and water used are to be paid by the Education Department. Maintenance of the building as well as of the building

frame and structure, rubbish disposal and external cleaning is to be handled by GSB and is included in the rent.

Interior cleaning, damage to window panes, and modifications to the facilities are to be handled and paid by the Education Department.

Common running costs are to be divided between the departments as follows:

Cleaning	:	to be carried out by the Education Department with the exception of the swimming pool and dining and caféteria facilities, which are cleaned by the maintenance staff. The costs are divided between the various departments according to area cleaned.
Material	:	Purchases are to be made by the greatest user. For more expensive material (audio-visual equipment, copying machines, etc.) used jointly, simple notes are kept showing frequency of use, more expensive repairs, etc. The costs are then distributed through internal debiting between departments.
Service Staff	:	Five service assistants are employed by the Leisure Department. The Education Department pays for half an assistant post.
Social Assistant	:	A social assistant common to the social service and the school (serves all the schools within the Lövgärdet school district) is employed by the Social Affairs Department. Internal debiting takes place between the departments.
Leisure Activities	:	All "animateurs" of leisure activities (altogether 12 in Lövgärdet and Rannebergen) are employed by the Leisure Department. The Education Department pays for one such full-time post common to Rannebergen-Lövgärdet.

Staff Functions

79. A list of the staff, employed by the municipality, serving in the Centrum and in other municipal service facilities in the district (excluding cleaning staff) is given in Table 6. In the Centrum, there is no-one among the leisure staff who has an overview or overall responsibility for all the activities in the leisure centre, i.e. the function assumed in a school by a teacher acting as administrative assistant. The four

Table 6

LIST OF STAFF SERVING AT RANNEBERGEN CENTRUM OR IN THE DISTRICT

In the Centrum	School	9 teachers of whom 1 with administrative responsibilities, 1 school nurse (1 day/week) school doctor (certain hours/week), 3 staff for school meals
	Leisure Centre :	5 service assistants, 4 specialised leisure "animateurs" (the caféteria under lease)
	Sports Hall	Staff from the school and the leisure centre
	Swimming pool	1 head, 3 staff
In the District outside the Centrum	Day Nursery/ Leisure Home (50 places)	2 child nurses, 4 nursery school teachers, 1.5 assistant, 2 leisure "animateurs"
	Day Nursery (60 places)	8 child nurses, 4 nursery school teachers, 2.5 assistants
	Combined Nursery and Primary School	4 primary school teachers (L-level) 3 nursery school teachers
	Leisure Home/ "Home" Cottage	2 leisure "animateurs"
	Park play - Cottage I	1 leisure "animateur", 1 assistant
	Park play - Cottage II	1 leisure "animateur"

"animateurs" are responsible, in principle, for different parts of the leisure activities, e.g. the "all-activity-workshop", dancing classes, theatre. All the leisure "animateurs" take part in the activities arranged for pupils during breaks. Service and care is assured in traditional school and leisure facilities by the caretaker and/or service assistants. The function of school caretaker at Rannebergen is part of the duties of the service assistants, as are other service and care functions.

ACTIVITIES - USERS

80. Table 7 lists the regular activities offered in the Centrum in the Autumn of 1975 (i.e. activities occuring each week at the same time), and the groups at which these are aimed. The time-tabled activities of the school are not included. The activities listed are organised and run by the leisure staff and associations active in the district. The activities which take place in the facilities of the church are organised by personnel from the church. Besides the activities listed in this table, certain occasional events take place, e.g. visits of theatre groups, the Rannebergen Day, etc. Furthermore, facilities are let occasionally, for example, for parents' meetings, association activities, sports etc. The Centrum is open on weekdays from 8 a.m. to 10 p.m. and on Saturdays and Sundays from 8 a.m. to 4 p.m. The swimming pool is open every weekday, as a rule, until 8 p.m.

81. For pupils attending the lower and middle levels of the "Grundskola" (7-12 years) there are as a rule no organised activities after school hours. These children have to go to the park play. Children below 10 may stay in the leisure centre until 7 p.m. and those under 13 until 9 p.m. A considerable number of children and young people use the Centrum. Those who come to the leisure centre without taking part in any organised activity, i.e. sit in the cafeteria, listen to music, play cards, etc. consist almost exclusively of children up to the age of about 16.

82. Via the activity group associations active in the district have through the reference group and the council for leisure activities had ample opportunities to present their views and influence the use of the various facilities. The individual users take only a very small part in managing and planning the use of facilities. Wishes and views can be expressed to the staff who discuss these in the local working group. Attempts were made during the autumn of 1975 to create a teenage-group

Table 7

REGULAR ACTIVITIES IN THE CENTRUM IN THE AUTUMN OF 1975

Hour	Activity	Facility	Age Group/User Group	Observations on Number of Participants
Monday				
11.00-15.00	"All-activity workshop"	Woodwork, metalwork	All	5-15
	"Sewing cottage"	Textiles	All	
	Childcare	Clubroom kitchen	from 4 years	
11.00-12.00	Activities during break	Common room	Pupils	about 50
11.15-12.00	Gymnastics	Sports hall	Retired people	about 20
13.00-14.00	Rythmic dancing, games	Physical training room II	4-6 years	about 6
14.00-15.00	Jazz dancing	- " -	Adults	about 6
16.00-18.00	Basketball school	Sports hall	All	Association about 10
18.00-19.00	Swimming	Swimming pool	Young people	- " - about 10
18.00-20.00	Badminton	Sports hall	All	- " - about 20
19.00-22.00	Teenagers' evening	Teenagers' room	from 13 years	10-20
20.30-21.30	Jazz dancing	Physical training room II	Adults	about 6
19.00-21.30	Study of the Bible	Meeting room of the Church	All	
Tuesday				
9.00-11.00	Small children's morning	Children's corner of the Church	4-7 years	
11.00-12.00	Activities during break	Common room	Pupils	about 50
14.00-17.00	Athletics	Sports hall	7-12 years	
16.00-17.30	Little ones of the parish	Church	7-9 years	
17.30-18.30	Football	Football pitch	7-9 years	
18.00-19.00	Badminton	Sports hall	All	Association about 10
19.00-20.00	Football	- " -	7-9 years	
18.00-19.30	Juniors of the parish	Church	10-13 years	
18.00-20.00	Photography course	Photography laboratory	All	
18.30-21.00	Open air association	Outside/clubroom	All	
19.00-22.00	Debate around a theme	Gallery	Adults	
20.00-22.00	Gymnastics	Sports hall	All	Association about 15
Wednesday				
11.00-12.00	Activities during break	Common room	Pupils	about 50
11.00-14.00	Activities for retired people	Assembly hall	Retired people	Association
18.00-22.00	Table-tennis	Assembly hall	10-13 years	
18.00-22.00	"All-activity workshop"	Woodwork, Metalwork	All	25-30
	"Sewing cottage"	Textiles	All	
18.00-19.00	Swimming	Swimming pool	Young people	Association
18.30-20.30	Old time dancing	Dining room	All	about 20
19.00-22.00	Silk painting (batik)	Studio part of study hall	All	about 10
19.30-21.00	Adult education (English)	Classroom	Adults	about 10
Thursday				
9.00-11.00	Small children's morning	Children's corner of the Church	4-7 years	
11.00-12.00	Activities during break	Common room	Pupils	about 50
13.00-16.00	Activities for retired people, hobby, etc.	Meeting room of the Church	Retired people	
14.30-15.30	Dancing-Drama	Physical training room II	7-9 years	5-10
15.30-16.30	Jazz dancing	- " -	10-12 years	5-10
16.00-19.00	Model making	Woodwork, metalwork	13-15 years	about 10
16.30-17.30	Jazz dancing	Physical training room II	from 13 years	5-10
18.00-21.00	Badminton	Sports hall	All	Association about 35
19.00-22.00	Discothèque	Dining room/teenagers' room	From 13 years	about 40
Friday				
9.00-13.00	Hobby activities for retired people	Club room	Retired people	about 10
11.00-12.00	Activities during break	Common room	Pupils	about 50
14.00-17.00	Athletics	Sports hall	7-12 years	
15.00-16.30	Drama	Classroom	10-12 years	about 5
18.00-21.00	Discothèque-"Mini Club"	Dining room	7-12 years	about 40-50
19.00-21.00	Film	Assembly hall	Adults	5-10
19.00-21.00	Athletics	Sports hall	13-16 years	
Saturday				
12.00-16.00	"All-activity workshop"	Woodwork, metalwork	All	5-15
12.00-16.00	"Open house"		All	
14.00-15.30	Film	Assembly hall	10-13 years	
Sunday				
9.00-13.00	Physical exercise for families	Outdoors	All	about 10
10.00-12.00	Tennis	Sports hall	All	Association about 6
11.00-13.00	Church service	Clubroom	All	Angered's Evangelists
12.00-14.00	Physical exercise	Sports hall	All	20-40
		Physical training room I		
12.00-16.00	Sunday gathering/Games	Dining room	Families	20-80
	children's activities			
14.30-16.00	Film for children	Assembly hall	Children	30-50
	Sunday school	Church	Children	
	Church service	- " -	All	

where the teenagers themselves would take a more active part in running their activities and in deciding what activities there should be. According to the leisure "animateurs", it has, however, been difficult to activate and keep such a group together. The result so far has therefore been minimal. The reasons for this have not quite been made clear. One reason, however, may well be that the ideas and suggestions, put forward by the teenagers, e.g. modifications of rooms, often cannot be implemented straight away for economic and organisational reasons (bureaucracy) with the result that they lose interest and patience.

83. The activities to take place at the Centrum are planned in the various working groups. A survey was made amongst the population (not written-up) in the spring of 1975. The leisure staff walked around in the neighbourhood informing residents of existing activities and asking them what requests they had for additional activities. Few suggestions for new activities were received on this occasion, however. A similar survey is planned for 1976. Otherwise, the various activities have been planned on the basis of the experience gained by leisure staff in other leisure centres and of reports on the age and social composition of the population. A folder describing the activities offered in the Centrum is distributed to all households twice a year.

84. Non-school activities in facilities intended for school use comprise essentially the "all-activity-workshop" and the "sewing cottage". These take place in the craft facilities of the school three times a week, when the public for a fee of 1.25 Swedish Kroner an hour, can make use of the resources contained in these facilities (carpenter's bench, tools, sewing machines, etc.) and, for example, can sew clothes or make furniture. The activities are run by leisure "animateurs" who sell material, give advice, etc. Very few school activities take place in facilities planned for non-school use.

PLANNING PROCESS OF THE CO-ORDINATED CENTRE OF VÄSTRA FRÖLUNDA

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135130

SITUATION OF VÄSTRA FRÖLUNDA IN THE MUNICIPALITY OF GÖTEBORG

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DEVELOPMENT OF VÄSTRA FRÖLUNDA

Background

1. Västra Frölunda, formerly a separate municipality, was incorporated with Göteborg in 1945. At the time of the incorporation the municipality was sparsely populated and consisted essentially of agricultural areas. During the 1950s urbanisation began at a relatively slow pace. The greater part of the area was built up in the 1960s and at present a few additional districts, mainly intended for individual housing, are being developed. Thereafter, the development of Västra Frölunda will, on the whole, be complete.

Population

2. The population of the former Västra Frölunda municipality is now 80 000. This figure is likely to remain relatively constant over the next 10 to 15 years. For service functions of a more extensive nature, it is possible to reckon with an even larger population scale, since total population in the south-west districts of Göteborg amounts to approximately 115 000.

Frölunda Centrum

3. Towards the end of the 1950s planning started on a so-called B-Centrum (the inner city of Göteborg = an A-Centrum), to be located almost in the middle of the area. This centre was to function as a regional centre for the south-west districts and as a neighbourhood centre for the nearby housing areas. The town plan for the Centrum area was adopted in 1959 and in 1966 the first phase, known as Frölunda Torg was completed. This covered commercial services and some health care and social service institutions.

Sites for Upper Secondary Schools

4. Three sites had been reserved at Frölunda Centrum for upper secondary education. At the time this level of education in Sweden was split

and comprised several different branches: general education, commercial education, vocational training and technical education. The three sites were intended for schools of the first three types.

5. In 1968 a decision was taken by the Swedish parliament to co-ordinate all uper secondary education in the form of a single school, to be called the "Gymnasium" school. This implied that the assumptions on which the town plan had been based, were invalidated. A study made by the Göteborg Department of Education showed that only one of the sites reserved for upper secondary education would be capable of accommodating a "Gymnasium" school of the new type, namely the site immediately north of Frölunda Torg.

Other Services

6. In the town plan provision had been made to locate certain cultural services on the above-mentioned upper secondary school site, amongst them a library and a church. In addition, a site for a leisure centre had been reserved between Frölunda Torg and the school site in question. A provisional library had been provided in the area at the time of the completion of Frölunda Torg and the leisure centre, which is the "open" type was created in 1970. The Leisure Department is responsible for running the activities of the leisure centre. Entrance is not tied to membership of associations or clubs. A certain number of activities for old people are organised during daytime. The rest of the time the leisure centre operates mainly as a youth club.

UPPER SECONDARY SCHOOL PLANNING DURING THE 1960s

The Göteborg Region

7. The 1968 decision by parliament concerning the "Gymnasium" school had been preceded by five years of work by a commission. Part reports had already been published in the mid-60s; these indicated clearly the main features of the proposed "Gymnasium" school. Göteborg and neighbouring municipalities therefore decided to carry out a study which was to form the basis for the creation of new schools in the region. In this regional study provision was made for a "Gymnasium" school in Västra Frölunda with a capacity of 2 000 places. It is worth mentioning that at the time the State Commission stated that schools with 3 000 to 4 000 pupils would be necessary if there was to be a wide variety of options at one and the same school.

School Investments in Göteborg

8. Compulsory schooling was extended to 9 years from 1962. This type of school was called the basic school or "Grundskola". Its implementation entailed serious problems of facilities provision especially in the new housing areas. Measures to solve these problems had to be taken rapidly in order to prevent a situation in which pupils (aged 13 to 16) would have to make long journeys and be subjected to inconvenient school hours.

9. With the introduction of the "Grundskola" the secondary modern school, "Realskola", which was a voluntary school and recruited its pupils after either the 4th or the 6th year of primary school was dispensed with. The municipality of Göteborg used its resources to invest in new buildings for the "Grundskola" in the outer housing districts whilst awaiting the final government decision on the "Gymnasium" school.

10. The expansion of upper secondary education during the 1960s (at present covering about 85 per cent of the 16 year olds) was made possible by using the facilities of the closed-down "Realskola" and by renting workshop premises for vocational education and training.

CO-ORDINATION OF PLANNING BETWEEN BOARDS AND DEPARTMENTS

Normal Co-ordination of Planning during the 1960s

11. There was already, in the early 60s, a certain amount of contact between municipal boards and departments on planning matters. For instance, facilities for the town library were provided in some new schools, some gymnasia were extended to the size of sports halls. There was, however, no structured organisation for co-ordination, nor had the Municipal Council issued any directives in this respect.

Planning Work in Connection with the Development of Angered

12. In 1966 Göteborg incorporated two municipalities north-east of the city, Angered and Bergum. A master plan was drawn up for the development of the area, with housing planned for over 100 000 people. In this context, the Municiaplity commissioned a study of the service facilities needed in the area. The study, "Angered's Leisure Centre", also raised the question of co-ordination in the provision of facilities and the planning of activities. The study was submitted for consideration to the various municipal boards.

13. When the Municipal Council considered the matter in March 1968 it requested the Education, Library, Sports and Central Social Service Boards to co-ordinate the location of educational and leisure facilities. The Board of Education was requested to call a meeting of representatives of the boards concerned in order to set up a joint planning group. At a meeting in May 1968 with the Bureaus of the Boards (= chairmen and vice-chairmen) and the heads of departments a planning group was created composed of four officials, one from each of the departments concerned (see page 155). The group met regularly from the autumn of 1968 and dealt with general questions concerning co-ordination of planning as well as with co-ordination problems in relation to individual projects. The detailed work was carried out by the planning department of the Department of Education.

PLANNING START FOR AN INTEGRATED CENTRE IN VÄSTRA FRÖLUNDA

Decision by the Municipal Council

14. In connection with the co-ordination work for Angered, the future centre of Västra Frölunda had also been discussed, but no detailed work had been done in 1968. In February 1969 there was a motion in the Municipal Council proposing that the cultural services at Frölunda Centrum be developed without awaiting the decision to build the new "Gymnasium" school. When the matter was discussed in the Municipality it was suggested that the Municipal Council should set up a steering group of five to lead the work of investigation. The majority of the Municipality, however, considered that the matter should be entrusted to the Education, Library, Sports and Central Social Service Boards. Planning ought to be carried out in the same way as for Angered and in co-ordination with other interested parties, especially the Museum Board and the institutions in charge of theatre and music activities. It was suggested that the various boards be requested to draw up a programme or brief for a combined educational ("Gymnasium"), cultural and leisure centre in Västra Frölunda. The Municipal Council endorsed the proposal of the Municipality.

Steering Group

15. On the initiative of Councillor Åke Norling, at that time responsible for education, culture and leisure, the boards concerned decided to facilitate the setting-up of a steering group, composed of elected representatives,

in support of the existing planning group. A member from each of the boards concerned, including the Museum Board, was to be appointed to the steering group which thus came to consist of five people altogether. Following an agreement between the political party groups, the choice of the members was made in such a way that the party representation corresponded to that in the Municipal Council. In view of the involvement of the Museum Board, an official from the museums department was designated as a member of the planning group. As from 1974 a further member, representing the Board of Health, has been appointed to the steering group and the planning group has been extended to include a representative from the department of health.

16. The steering group came to be composed of the chairman or vice-chairman of each of the boards concerned. In order to ensure that sufficient information was disseminated about the work of the groups, minutes of all meetings have been circulated to the Bureaus of the Boards and to the heads of departments. In addition, advance notices of meetings have been sent for information to all heads of departments not represented on the planning group, thus enabling them to attend meetings when they so wished.

PRELIMINARY PLANNING

Questionnaire

17. In the spring of 1970 a questionnaire was sent out from the planning group to the majority of the municipal departments in Göteborg concerning their needs for facilities at Frölunda Centrum. Several other bodies were also contacted, amongst them the national insurance service, the employment office, the Church Board and the non-conformist movement. In the summer of 1970 it was possible to draw up a preliminary list of the demands for facilities. The activities it was wished to accommodate were:

Education Department	"Gymnasium" education for about 2 000 pupils
Library Service	Regional library for the south-west districts of the city
Social Department	Leisure activities; in the first instance those linked to associations or clubs
Sports Department	Indoor and outdoor swimming pools and possibly sports
Health Department	Dental service and medical centre

Museums Department	Exhibitions
The Theatres	Music and theatre performances
Church Board	Church services and parish work

18. In the preamble to the questionnaire, it had been stated that each interested party in this initial phase should give a rough indication of its own needs for facilities without any consideration as to whether co-ordination with another body could be envisaged. Needs for facilities had also been put forward by other interest groups, such as the educational associations, the nonconformist movement and artists' groups.

Programming

19. In many cases the data submitted were incomplete. Further details regarding hours of use and the way in which the various activities were to be run were needed before the possible joint use of facilities could be discussed. During the first few months of the autumn the group in charge of the project therefore gathered the missing information by means of interviews with representatives of various activities. In some cases the interested parties had to receive help in "translating" a stated function into floor area. At the end of the 1960s the architect for the "Gymnasium" school, John Snis, had already been appointed and he participated in the programming work.

20. In order to investigate the possibilities for joint use of facilities, the planning group appointed a working group comprising representatives of the four interested parties with the needs for the most extensive facilities, and the architect. The total floor area, serving as the take-off point for the group's work, was about 37 500 m2. At the start there was very little enthusiasm for co-ordination, since joint use of facilities always implies greater problems than when each user group is entirely free to dispose of its own facilities. It seemed as though the members of the group exaggerated the disadvantages and took care that no other department would obtain advantages at the expense of its own. After several months of discussion it was possible to arrive at a saving of about 3 000 m2. At a meeting with the steering group it was stressed that joint use must be taken further if a decision to go ahead with the project was to be obtained. This statement was made bearing in mind earlier discussions concerning integrated facilities projects in Göteborg.

21. Work on the elaboration of the integrated programme continued. It was, however, delayed a few months due to a labour dispute. Further co-ordination of the programme was effected by the group in charge of the project and the architect. Following contacts with the interested parties

the proposal was adjusted slightly. The floor areas contained in the programme in the summer of 1971 were:

"Gymnasium" school	22 500 m2	
Regional library	3 455 m2	
Leisure facilities	3 065 m2	
Sports facilities	4 870 m2	+ outdoor swimming pool
Medical care	850 m2	
Museum	200 m2	
Theatre	555 m2	
Cinema	740 m2	
Educational associations	800 m2	
Church	350 m2	
Nonconformists	200 m2	
	37 585 m2	

The co-ordinated programme arrived at a total floor area of 33 300 m2, i.e. a saving of 11.4 per cent. It was estimated that a complex of this size would cost between 50 and 60 million Swedish kronor at 1971 prices. At the time the programming work was going on the working methods of the Municipality of Göteborg were re-organised. An improved longer-term planning was introduced with 5-year plans covering both investments and running costs. In the 1971-75 plan, the Education Department was alone among the parties interested in the Västra Frölunda project in having set aside resources for its implementation.

Reporting

22. In order to agree on the procedures to adopt for the further work, a meeting was arranged in September 1971 between the steering and planning groups and three of the seven municipal Councillors, namely those responsible for urban development, education/culture and leisure, and health. Agreement was reached at this meeting concerning the need for further work to be undertaken, before reporting to the Municipality, as follows:

- examining the possibility of reducing the size of the complex by decentralising certain activities to neighbouring housing districts.
- analysing in more detail the level of services to be provided;
- listing the shortcomings in existing services in the south-west districts;
- estimating the running costs of the centre.

RECONSIDERATION OF THE PROGRAMME

Study Related to the "Gymnasium" School

23. The new "Gymnasium" school was introduced in Sweden in the summer of 1971. Gradually, a heated debate regarding the suitability of large schools had started up. Various interest groups took a keen part in this debate, which was at times extremely forthright. The education authorities had, however, made it clear that it would probably not be necessary to have schools of the size of those which had been mentioned in earlier studies, since a certain specialisation of each school unit could be envisaged. As soon as more detailed information on the new "Gymnasium" school had been issued by the central authorities, a study concerning the introduction of the "Gymnasium" school in the municipality of Göteborg was initiated in the summer of 1971. Very soon the planning work focused on much smaller school units than those initially thought necessary. Units with a capacity of 1 300 to 1 400 pupils were considered suitable both in economic terms and as regards the range of options that could be offered. The results of this study were submitted to the Board of Education in February 1973 and were immediately transmitted for consideration to a great number of bodies: schools (school management, staff, pupils), staff and pupils' associations, other administrative departments, neighbouring municipalities, industry etc. In the report the capacity indicated for the Frölunda "Gymnasium" school was 1 300 pupils and it was further suggested that the school be given a certain technical specialisation.

Adjustment of the Facilities Programmed

24. Since it was clear that the size of the school would be considerably reduced, the pace at which programming could proceed had to be slowed down during 1972. However, other interested parties investigated the possibility of other solutions while at the same time the level of ambition of the project was analysed further, partly in connection with other studies of the level of services to be provided in the municipality as a whole. In accordance with the intentions expressed by the Councillors, the departments studied the possibility of decentralising part of the activities envisaged. The aim was to avoid creating an unnecessarily large complex at Frölunda and also to improve neighbourhood services in the various housing districts. During 1972 and 1973 it was decided, among other things, that certain functions and facilities related to leisure and sports should be accommodated at new schools for the "Grundskola" in the area.

25. Immediately after the publication of the study on the "Gymnasium" school, a new programme proposal was drawn up in May 1973 which comprised a total floor area of 28 740 m2 before co-ordination and 24 690 m2 after co-ordination. The breakdown of floor area between the various interested parties was as follows:

"Gymnasium" school	16 800 m2	
Regional library	2 750 m2	
Leisure facilities	2 300 m2	
Sports facilities	4 370 m2	+ outdoor swimming pool
Medical care (dental service)	350 m2	
Museum	200 m2	
Theatre	105 m2	(only ancillary areas)
Cinema	740 m2	
Educational associations	800 m2	
Church	325 m2	
	28 740 m2	

The facilities which it was thought could in the first instance be the object of joint use were sports and leisure facilities, assembly halls and dining rooms and study areas.

26. At a meeting with the steering group in May 1973, the education authorities stated that it might be possible to accommodate part of the "Gymnasium" education in a nearby upper level "Grundskola", Ekebäcksskolan. Indeed, new forecasts of the number of children had shown that the district north-east of Frölunda Centrum, which at present has three schools catering for the last three years of the "Grundskola", would require only two schools towards the end of the 1970s or the beginning of the 1980s as a result of the diminishing school population. Only 350 metres separate Ekebäcksskolan from the site of the new complex. The steering group stated that in view of the limited economic resources of the municipality every attempt should be made at design stage to reduce the total floor area through further co-ordination.

Sketch Plans as a Basis for Further Analysis

27. At a meeting in September 1973 the architect presented initial sketch plans for the integrated complex to the steering and planning groups. The assumption was made that Ekebäcksskolan would form part of the new "Gymnasium" school. The sketch plans were not detailed; they consisted

mainly of rough studies of areas, placed on existing maps and on a mock-up of the site. They showed three blocks which either could form separate buildings or be combined into a single one. The composition of the blocks had been made according to function, and comprised:

- library, meeting rooms, dining areas and dental service (culture and leisure block);
- sports halls, indoor swimming pool directly connected with the outdoor pool (sports block);
- educational facilities: workshops, technical laboratories and general teaching areas (school block).

In the ensuing discussion two aspects in particular were emphasised by members of the groups:

- as far as possible the question of parking places ought to be solved in co-ordination with Frölunda Torg so that a minimal number of cars would have to be accommodated on the site of the Centrum;
- the three blocks should if possible be combined into a single building to facilitate rational operation and good service to users.

28. In November 1973 a proposal for a time schedule was put forward according to which a decision in principle had to be taken by the Municipal Council during the first half of 1974 if the centre was to be completed by 1978. During the autumn the architect had continued his work in accordance with the views expressed by the steering group and presented four different proposals as regards the positioning of the blocks. All four involved a single building with the library facing south (towards Frölunda Torg) and the school north (towards Ekebäcksskolan). The relationships between different functions were discussed in detail. Because of the size of the complex it became clear that not all wishes for contiguity could be satisfied. The group agreed on the principle that the larger the number of users for a given function, the closer it should be to Frölunda Torg. One of the most difficult problems was to locate the outdoor swimming-pool to fit in with this principle; a pool like this has to be fenced, and furthermore would lie idle for 8 to 9 months of the year.

THE FINAL PROGRAMME

The Organisation of the "Gymnasium" school

29. In analysing the written viewpoints submitted by the various bodies to which the published results of the study on the "Gymnasium" school had been transmitted for consideration (cf. paragraph 23), it was found that they coincided on a number of points. One of these concerned the size of schools, which it was considered should be reduced even further. The Education Department felt it would be unfortunate if the "Gymnasium" school at Frölunda Centrum were to be reduced any further, since the number of places needed at this level of schooling in the area could be estimated at almost 2 000. A reduction would thus imply that many pupils (also in the future) would have to travel to the inner city for their education. The problem was solved, however, since after discussions with the urban planning office it proved possible, through land exchanges and changes in the town plan, to find a sufficiently large site for a second "Gymnasium" situated about 500 metres south of Frölunda Torg.

30. In March 1974 a proposal was put forward implying a solution to the question of "Gymnasium" education in Västra Frölunda. In this a school for about 1 100 pupils would be incorporated in the new centre and a school with capacity for about 800 pupils would be built later on the site, south of Frölunda Torg, probably during the 1980s. It was suggested that the first school unit should comprise ten different educational branches, theoretical as well as practical, with a certain predominance of technical education.

Programme Pamphlet

31. Parallel to the work described above, the group in charge of the project and the planning group had made the final adjustments to the programme. This was summarised in a pamphlet which described the background, bases and evolution of the planning process. It also outlined the motivations of the various interested parties as regards the positioning of the various functions within the complex. An estimate of investment and running costs had also been made. At 1st January, 1974 prices the investment cost was estimated at 40 million Swedish kronor including adaptation of Ekebäcksskolan. The running costs were assessed at 17 million Swedish kronor. It was estimated that 5.5 million would be covered by state subsidies (the school) and 1.5 million by entrance fees, etc. Once the complex is completed, similar activities in the vicinity (the provisional

library, old "Gymnasium" school, etc.) will be closed down. These activities entail a cost to the municipality of 5 million. This implies that the net increase to the municipality was estimated at 5 million Swedish kronor per year.

32. The new programme comprised the following floor areas:

"Gymnasium" school	14 230 m2
Regional library	2 750 m2
Leisure facilities	1 150 m2
Sports facilities	4 170 m2
Medical care	400 m2
Museum	300 m2
Cinema	600 m2
	23 600 m2

Compared with the former programme (cf. paragraph 25) the following changes had been made:

- the number of places to be provided in the "Gymnasium" school had been further reduced;
- the range of leisure activities to be run by the municipality had been scaled down;
- the needs of the theatres and educational associations had been entirely incorporated in the facilities of the other interested parties;
- the church had withdrawn from the co-operative venture;
- the outdoor swimming pool had been eliminated.

After co-ordination the total floor area required was estimated at 21 250 m2, of which about 6 000 m2 could be accommodated in Ekebäcksskolan. The new building would thus comprise approximately 15 000 m2 to which certain joint circulation areas would have to be added.

The Decision in Principle

33. The programme pamphlet was discussed by the steering group which decided to ask the boards concerned to request a decision in principle by the Municipal Council. After consideration in the boards in April 1974 the Municipality recommended early in August that the matter be endorsed. On 28th August, 1974 the Municipal Council decided that a complex of the size indicated in the programme pamphlet should be erected as soon as

possible, and that the Board of Education should be invited to start design work. At its meeting in April 1974, the Board of Education had further decided to request the approval of the area programme by the National Board of Education. The latter's reply was delayed and it was not until May 1975 that the final programme could be adopted. However, in the meantime the group in charge of the project had been in regular contact with the officials responsible in the National Board of Education, so that design work could proceed pending the final decision.

ELABORATION OF DETAILED PROPOSALS

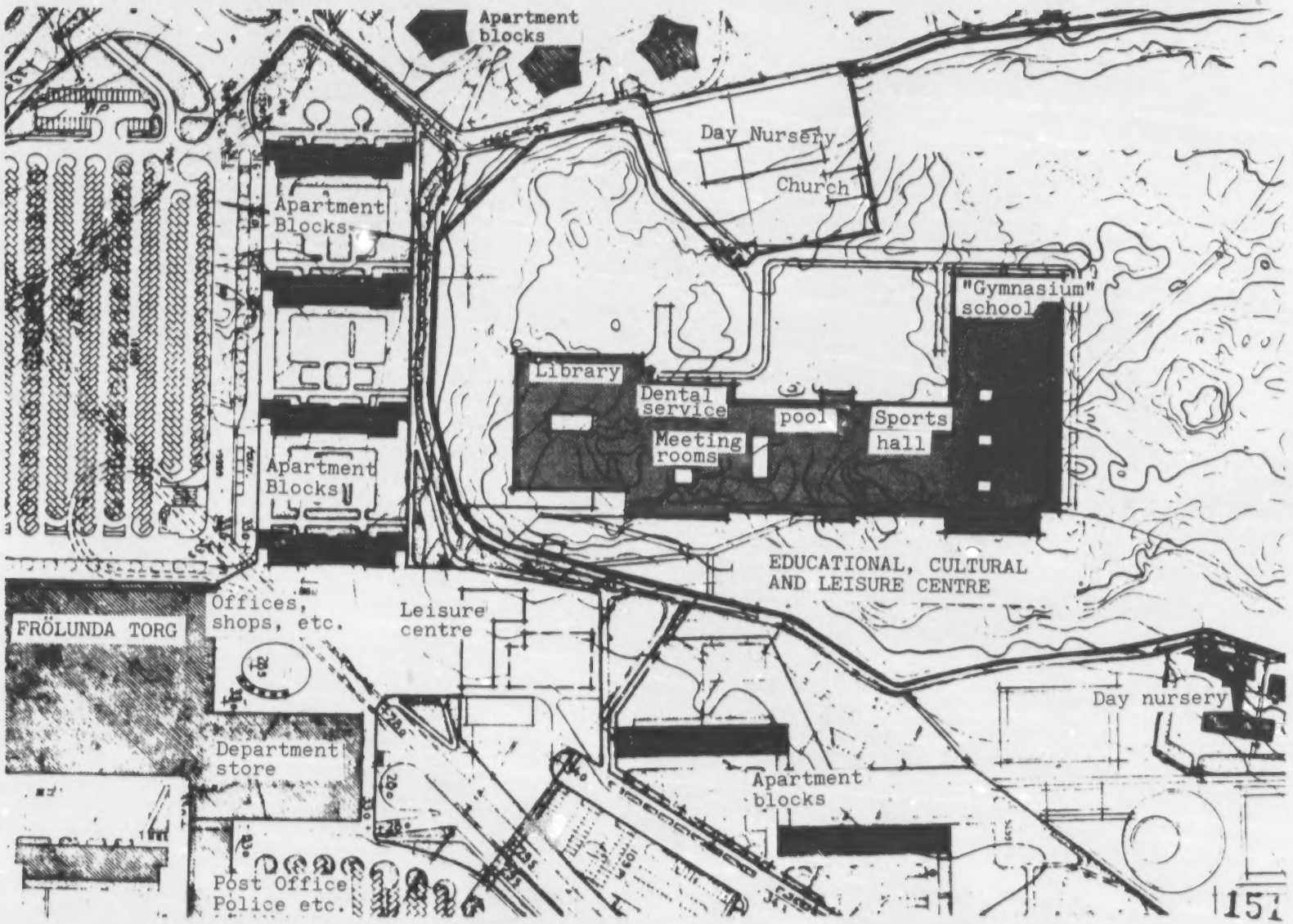
Main Layout of the Building

34. In the course of the autumn 1974 the architect elaborated a series of sketch plans. These were adjusted successively following discussions in the planning group and contacts with various departments, including the urban planning office. In November work had proceeded to a stage where there was general agreement on the main features of the complex. The activities would be grouped in a single building with a north-south covered gallery running along the east facade of the building. Seen from south to north the facilities would be located as follows: library/ museum, meeting rooms, dining areas, swimming pool and teaching areas. The dental service was placed along the west façade next to the meeting rooms. The main entrance faced south-east i.e. towards Frölunda Torg.

Organisation of the Planning Work

35. By then, the planning group found that the time had come to involve a far greater number of people in the planning work, people who would be directly responsible for the implementation of the project and/or its operation. A project organisation was created consisting of three co-ordination groups and six working groups (see page 155). The members were chosen according to proposals from the various departments. The initial task entrusted to the groups consisted in analysing and describing the functions, elaborating detailed proposals as regards the facilities, expressing viewpoints on the positioning of functions in relation to one another, examining the architect's sketch plans and submitting proposals as to the size of staff. Some constraints were, however, imposed: the main features elaborated so far had to be adhered to; no extension of the size of the complex was allowed.

GENERAL LAYOUT OF FRÖLUNDA CENTRUM



36. It turned out that several months were needed before the groups began to work satisfactorily. Initially, some members protested against the constraints imposed. Moreover, several meetings were required to get an understanding of each other's problems. Following this initial period the groups worked well and a certain enthusiasm developed. Many recognised the advantages of co-ordinating activities beyond the boundaries of departments. The main work was carried out by the working groups whose meetings the co-ordination groups were sometimes invited to attend. Because of the consensus and understanding which developed within and between the working groups it was not necessary for the co-ordination groups to intervene very often.

Sketch Plans

37. In order to allow the public to express its views on the project a two-week exhibition was organised in January 1975 at Frölunda Torg. Officials of the various departments participated at times to provide information. About 300 questionnaires were completed, most of them containing positive statements about the planning work carried out so far. No essential ideas that had not already been considered were put forward. In May 1975 the sketch plans had been elaborated in sufficient detail to enable their submission to the boards. Before this the departments had presented them to their staff associations and had requested them to submit their viewpoints in writing. The latter had resulted in some minor adjustments to the plans. On the whole, the staff associations were satisfied. Since examination of the plans by the central authorities is compulsory, the Board of Education submitted these to the National Board of Education in Stockholm, where they were discussed in detail in August 1975 on the occasion of a visit by representatives of the education department. This in turn led to some further adjustments to the plans.

Appointment of Consultants

38. Since there had been so many uncertainties around the project and so much concertation had been required, no consultants other than the architect had been involved except to provide some essential data (service supplies, general cost estimates etc.). During August/September the main consultants were appointed, namely the structural engineer, sanitary and heating engineer, electrical engineer, interior decorator and cost expert. These consultants were appointed in the following way: the programme was submitted to three consultants in each branch with a request to submit tenders; these were then negotiated. Those consultants

considered most apt to fulfill the requirements, both in terms of work organisation and costs, were engaged by the Board of Education.

Design Work

39. The consultants started studies on the technical aspects immediately. The question most discussed in the course of this initial design stage was the choice of structural frame. The structural engineer and cost expert submitted five different proposals. The fire protection authorities were consulted before the group in charge of the project finally decided to use a concrete frame. In addition, the main features were agreed for the heating system, sanitary accommodation, ventilation, electrical supply and furniture. The question of heat conservation especially was discussed since it had become particularly topical due to the energy crisis.

40. During this phase, which lasted until Christmas 1975, concertation took place successively with various interested parties. Often one or two members of a working group and sometimes representatives of the staff associations, were invited to assist the group in charge of the project, the architect and one or two of the consultants in solving problems of detail. Purely technical construction problems were as a rule discussed only by the design group and the consultants. Every fortnight concertation meetings were held between the group in charge of the project and the consultants for a general overview and the consultants submitted their proposals for solutions. With these as a basis the project group has successively taken the necessary part-decisions on the design - sometimes after having contacted the party interested or the working groups. Work at these meetings always followed the agendas drawn up in advance on the proposal of the consultants. Minutes were prepared by the project group. Copies of these were sent to the consultants, the members of the planning and co-ordination groups, the member of the working groups responsible for calling the meetings and the chairman of the steering group.

COSTS AND APPROPRIATIONS

41. As soon as the architect had completed some minor adjustments to the plans due to the service supplies, structural system etc., work started on the detailed cost estimates. This was ready in February 1976 and the estimates gave a figure of at least 50 million Swedish kronor at 1976 prices. A thorough analysis was then made of the various sub-items and discussed with the various interested parties to ensure that all necessary

components were included and to see whether any savings could possibly be made.

42. In March a first meeting was held with the planning group and subsequently with the steering group. At these meetings questions of standards and costs were raised and the further procedures discussed. It was decided that the project proposal should be submitted immediately to all relevant boards but that the Board of Education should request appropriations covering the complex as a whole. The Board of Education discussed the request for appropriations at the beginning of May and the other boards have subsequently endorsed the request made by the Board of Education. At the time of writing this report the Municipal Council was expected to take a final decision on the appropriations in August. The National Board of Education had to grant the State subsidy for the "Gymnasium" school before construction work could start. This was expected to be done in October.

FINAL DESIGN AND CONSTRUCTION

43. Detailed design work had started. Documents would first be drawn up for a separate tender for the blasting of the site and for the foundation work. The structural frame would again form the object of a separate tender and finally general tenders would be sought for the building itself. During the phase of detailed design work the group in charge of the project was to ensure that design proposals were submitted to the working groups and the representatives of staff associations as and when they were received so that the consultants were kept informed without delay. In this phase the group had to check carefully that the estimated costs were not exceeded. The time schedule indicated that the complex should be completed in the course of 1978. The school was to occupy the premises in August and the remaining parts were to be ready before Christmas. This presupposed, however, that all necessary authorisations (the State subsidy from the National Board of Education, the building permit from the County authorities, etc.) were obtained according to schedule.

VIEWS ON THE PLANNING WORK

The Programme

44. As the above description shows, the Programme has been reduced in stages; this is due to several reasons. The generally-increasing demands for community services, together with the more and more limited

possibilities for municipalities to increase their resources, has led to tougher and tougher budget discussions. This in turn has meant that the various departments have increasingly recognised the need for a tight programme if the centre were to be built at all. The demands for smaller service units in or in the immediate neighbourhood of housing districts mean that the large centres must be limited.

45. The scope of the final programme probably implies that it will be easier for people to find their way around the centre, and it will be a pleasanter place than if the floor area originally envisaged had had to be accommodated. The fact that the planning work has taken so long has thus had obvious advantages. The disadvantage is that the district has had to do without the necessary services for a few more years.

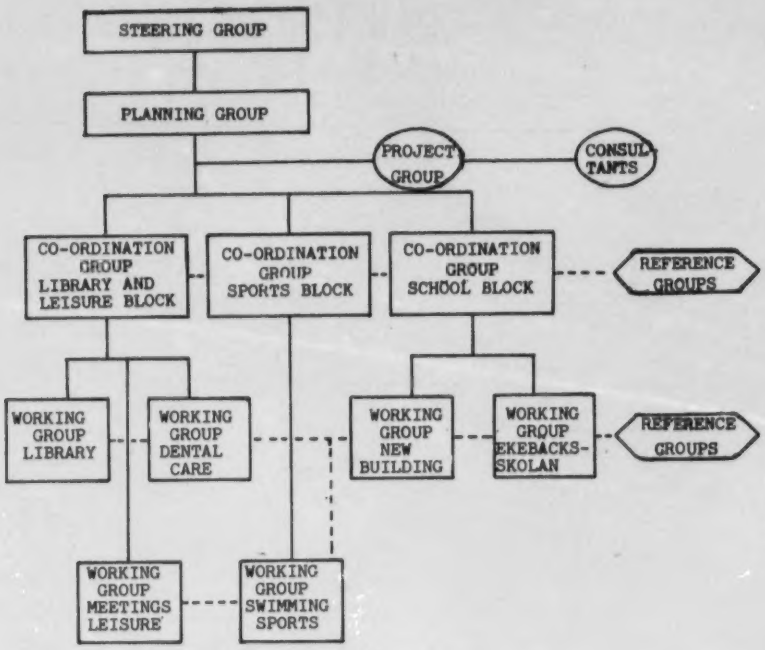
46. For the planning of the school there are central norms to build on. This means that certain floor areas correspond to a given organisation. The other interested parties have no such norms, set by central or municipal authorities, for the types of activity envisaged in this case. As a rule comparisons between different districts of the city and the levels of ambition set for the municipality as a whole serve as a basis. However, these change over time and thus numerous problems are entailed in planning work of the kind described. The multi-annual budgeting procedure increasingly developed by the municipality has nevertheless contributed to give better continuity to the work.

The Project Organisation

47. The organisation adopted with a political steering group and a planning group composed of fairly high-level officials from the various departments, all directly involved from the initial phases of the project has given stability to the work. The members of the planning group have felt responsible for their respective administrative areas. At the same time there was a certain political foundation due to the steering group. It is probably highly important to set a certain number of constraints before a great number of people in working groups etc. are given the opportunity to influence as large a project as this. Otherwise there would be a risk of the demands being set so high and the disparities between the viewpoints being so wide that the project would become impossible to realise.

48. It should be noted that the steering group with members from six boards has no formal decision-making power. The members of the planning group have the right to take decisions only within areas for which they are themselves responsible within their respective departments. It has

PROJECT ORGANISATION



Steering Group consisting of elected representatives from the following Boards: Social (group chairman), Education (group vice-chairman), Library, Sports, Museums, Health.

Planning Group consisting of: Head of Planning, Education Department responsible for calling the meetings of the group; Head of Planning, Sports Department; Head of Division, Social Affairs Department; Head of Museums Department; Administrative Head, Department of Health; Chief Librarian, Library Department.

Project Manager, official from the Planning Division of the Education Department.

Co-ordination Groups comprising staff from the departments concerned at head of division or head of section level, e.g. the heads of the leisure and library services of the western districts as well as school inspectors.

Reference groups including, among others, trade union representatives and personnel representatives in matters of safety.

Working Groups comprising staff which are today responsible for running the corresponding activities, for instance library and leisure personnel in the western districts, directors of studies and teachers as well as dentists. In some cases, the same person has been a member of both a co-ordination group and a working group.

therefore largely been necessary to conduct the work in such a way that agreement could be reached within the groups. When differing viewpoints arose, it has been necessary to dispose of time for further studies so that the issues could be properly highlighted. Afterwards, the groups had to discuss matters until they reached a consensus so that conflicts could be avoided as far as possible.

49. It has proved important to safeguard the co-operation and not create unnecessary confrontations. Where viewpoints have differed, the questions have been transmitted to the next level in the hierarchy, but the main rule has always been to solve each problem at the "right" level. It can now be stated that the problems practically without exception have been solved without any serious conflicts arising and that co-operation has worked well. Those who have participated in the planning work seem satisfied with the result. One factor which has probably contributed to this is the time that was available due to the changes in the planning assumptions. On the other hand, these changes have at periods implied that it has been difficult for all involved to muster enthusiasm for the work since every important change can be experienced as somewhat of a failure in respect of the earlier work.

50. Earlier experiences have shown that there are often difficulites in transmitting the intentions of the planners and designers to those who will be responsible for the operation of a centre, and a gap often occurs in this respect during the period of construction. For this reason, therefore, it has been clearly stated from the outset that the whole project organisation is to be maintained until the centre is occupied and in operation. A change of one member or two is, of course, possible in view of the long period of time, but the groups as such will remain unaltered. This has probably implied a greater sense of responsibility among the groups for the problems of operation than is normally the case. Once all the design work is completed and during the period of construction, the working groups should busy themselves with problems of furniture and equipment.

NEW TRENDS IN THE CO-ORDINATION OF FACILITIES

The Case of Upplands Väsby*

* *Condensed edited version of the Brochure prepared for the OECD Symposium at Skokloster 1976 by the Municipality of Upplands Väsby, the Building Society (Väsbyhem) and the architects (Brunnberg & Gillberg and Anjou AB).*

BACKGROUND

Upplands Väsby is a rapidly growing municipality with a population of some 30 000 inhabitants situated 25 kilometres North of Stockholm. Only about fifteen years ago Upplands Väsby was a small rural community with about 13 000 inhabitants, located around two major industries and a few hospital facilities.

As a result of its proximity to Stockholm and its outstanding traffic connections - on the motorway to Arlanda airport - as well as its plentiful supply of land suitable for building and its excellent environment, the municipality expanded considerably during the late 1950s and 1960s.

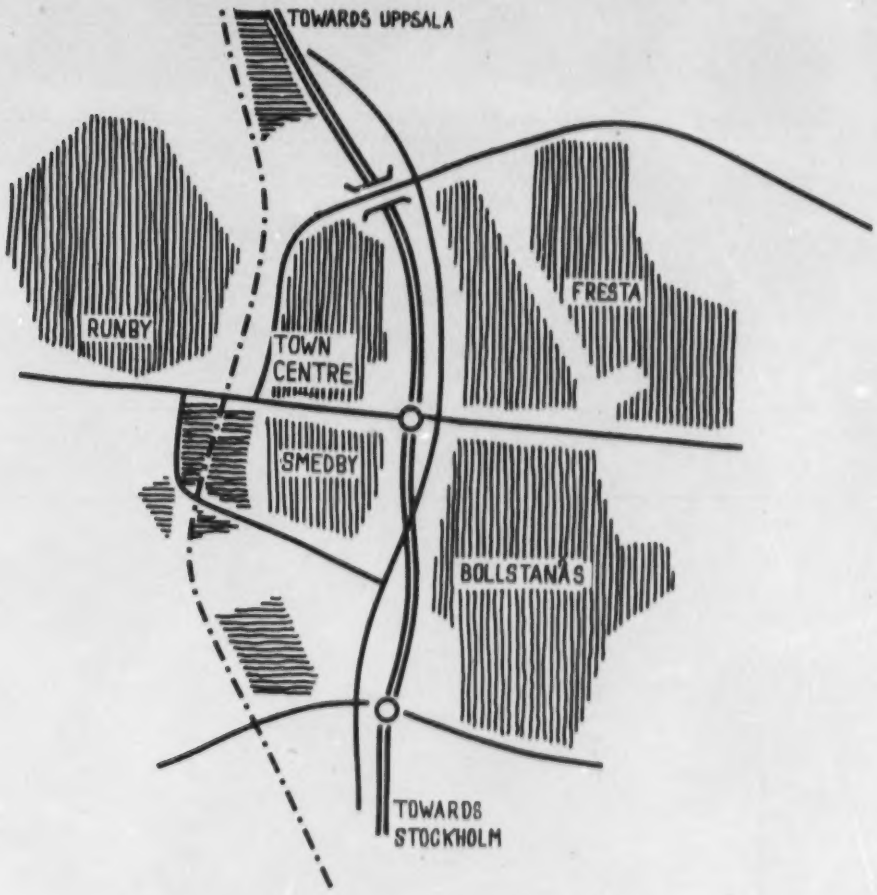
With an annual increase of 1 500 to 2.000 people per year, the population more than doubled during the period 1965-75. The average age is extremely low - 22 per cent are under ten years and only 7 per cent are 60 years of age or older; 14 per cent of the population are immigrants. A considerably lower rate of increase is planned for the future, a figure of 35 000 inhabitants at the beginning of the 1980s being regarded as suitable in relation to existing or projected services - public as well as private.

A total of 3 945 dwellings have been completed between 1970 and 1975 of which 47 per cent in blocks of flats and 53 per cent in individual houses. During the second half of the 1970s the rate of housing construction will decrease considerably and about 1 850 dwellings will be built.

In the public discussions on the development of residential areas the whole question of services has come very much to the fore and it has become natural to integrate the corresponding facilities with housing in various ways. As a result the building societies have, in several areas, been commissioned by the municipalities to construct many facilities which were previously built and owned by the municipalities themselves, e.g. schools, crèches, libraries, etc.

The advantages are that facilities of various types can more easily be integrated, thus enabling joint use which increases the rate of

Figure 1 **GENERAL PLAN OF UPPLANDS-VÄSBY**



utilisation considerably. In addition, administration can be rationalised and certain other services shared. This method of developing and administering service facilities has been made possible by the State allowing housing loans to be used for building schools, etc.

This method has been applied in both the Ekebo and the Grimstaby projects for which the municipality and the municipally-owned building society, Väsbyhem, set the following specific objectives:

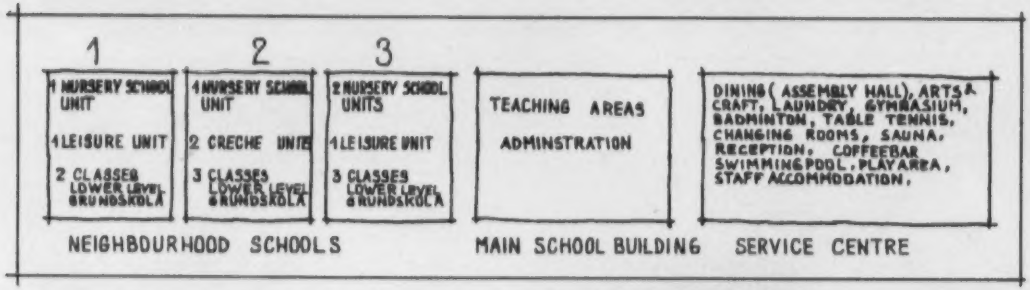
- the facilities were to be closely integrated with housing in order to improve the social environment;
- the facilities, particularly schools, were to be broken down into smaller units to avoid the concentration of large numbers of children in one single place;

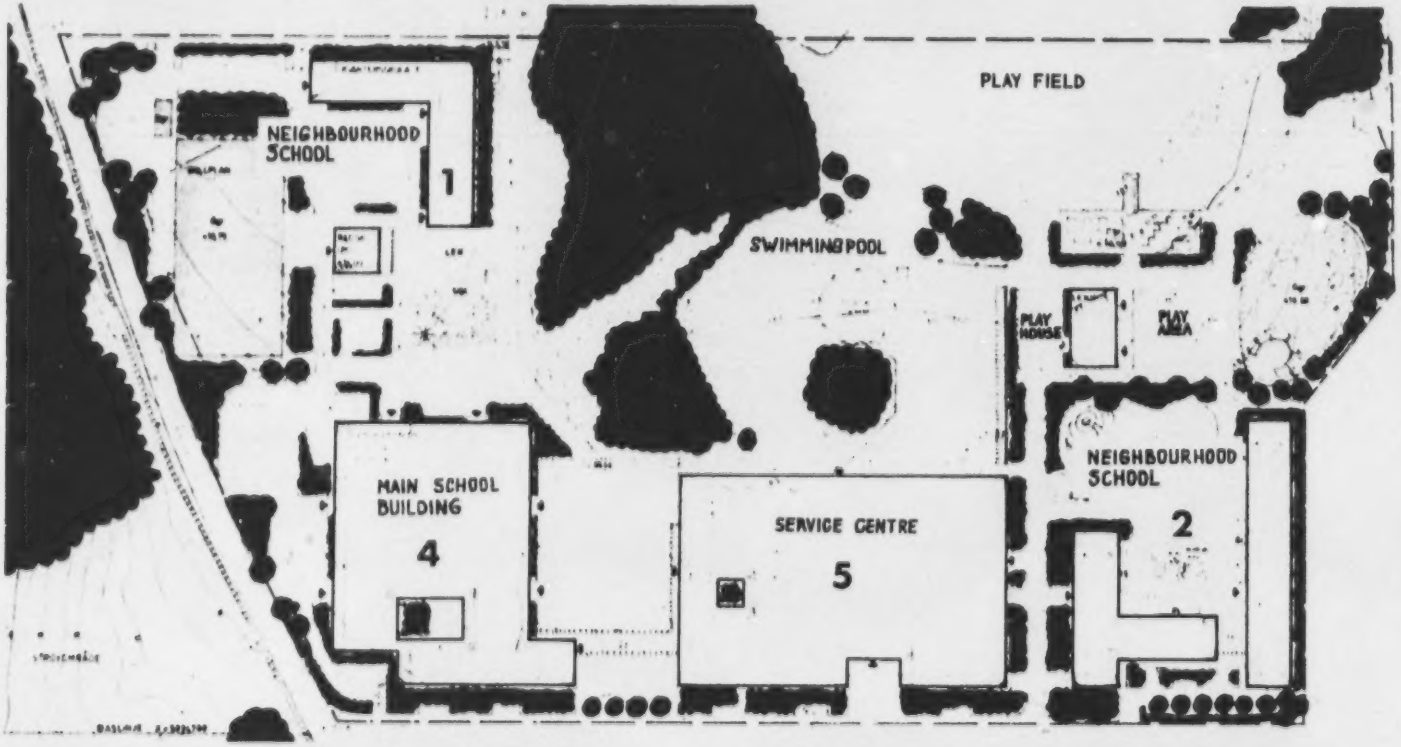
Figure 2 **SITE PLAN FOR SMEDBY**

- the facilities were to be suitable for conversion to dwellings when no longer needed for their original purpose (the present skewed composition of the population will, of course, change in the future).

The Ekebo project within the Smedby area was the first attempt to use a school as a basis for an expanded supply of facilities of this kind. The project was completed in the autumn of 1973 and the experience gained has been used in the design of Grimstaby where the integration concept has been developed further.

Figure 3 NEIGHBOURHOOD SCHOOLS 1, 2 (AND 3 NOT SHOWN ON THE PLAN) CONTAIN NURSERY SCHOOL/CRECHE UNITS AND CLASSROOMS FOR THE LOWER LEVEL OF THE GRUNDSKOLA, THE MIDDLE LEVEL USES THE MAIN SCHOOL BUILDING (4). THE SERVICE CENTRE (5) CONTAINS THE FACILITIES THAT CAN BE USED BOTH BY THE SCHOOLS AND THE INHABITANTS IN THE AREA





THE EKEBO PROJECT

Smedby is the largest housing area in the municipality and is situated immediately to the south of the town centre. When the area is completed, it will contain approximately 2 300 dwellings of varying types ranging from highrise blocks to individual houses, grouped around a large central park.

The old farm in the southern part of the park, Smedby Gård, will become a recreational and cultural centre for the area. The barn is being renovated to provide workshops, meeting rooms, etc. The stable houses ponies, cows, goats, pigs, etc. The park also contains jogging, ski and nature trails as well as an adventure playground. Ekebo is the Centre supplying services in the northern part of the area. Another similar centre is being planned close to the old farm.

The Ekebo project comprises a three entry "Grundskola" (lower and middle levels), eight units for early childhood education (nursery school, crèche and leisure units) and a series of other service facilities : laundry, gymnasium, dining, assembly hall, coffee bar, reception, swimming pool and indoor and outdoor playground.

The conventional solution often consists of providing three separate buildings - a school, a service block and a nursery school/crèche. The design of Ekebo differs radically from this traditional approach. The facilities which are primarily intended for the smallest children in the area, i.e. the nursery school, crèche and leisure units and the classrooms for the lower level of the "Grundskola" are accommodated in small units, known as neighbourhood schools located among the housing blocks.

The facilities which are open to all inhabitants are grouped in a central building called the Service Centre. Adjacent to this is the main school, housing the middle level of the "Grundskola" which needs to be close to more specialised accommodation to be found in the Service Centre. The entire complex is extremely flexible to allow for subsequent conversion of the facilities.

The neighbourhood schools have been designed in such a way that they can be converted to dwellings in the future. The buildings consist of long low units with clear spans between external walls so that partitions can be moved easily without structural change. Existing toilet and kitchen units can be extended.

Figure 4 **THE NEIGHBOURHOOD SCHOOLS CAN BE CONVERTED TO DWELLINGS**

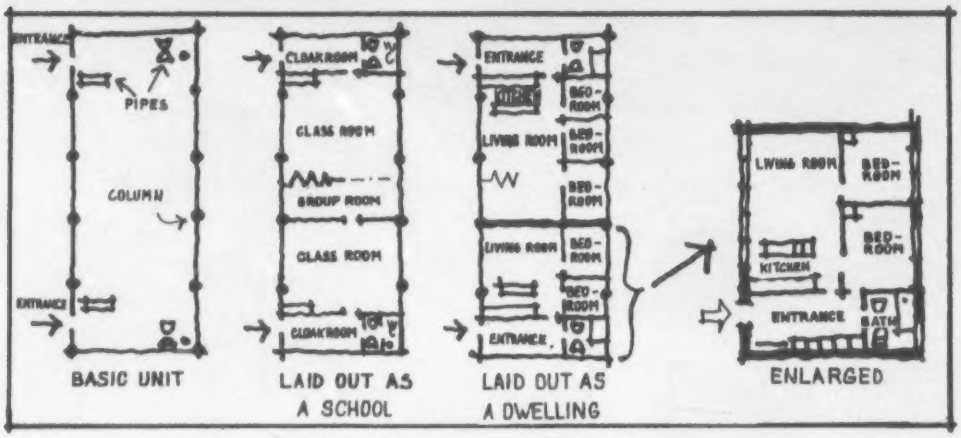
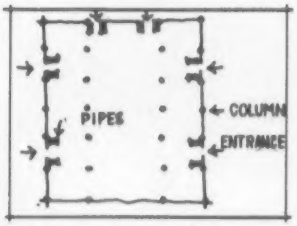
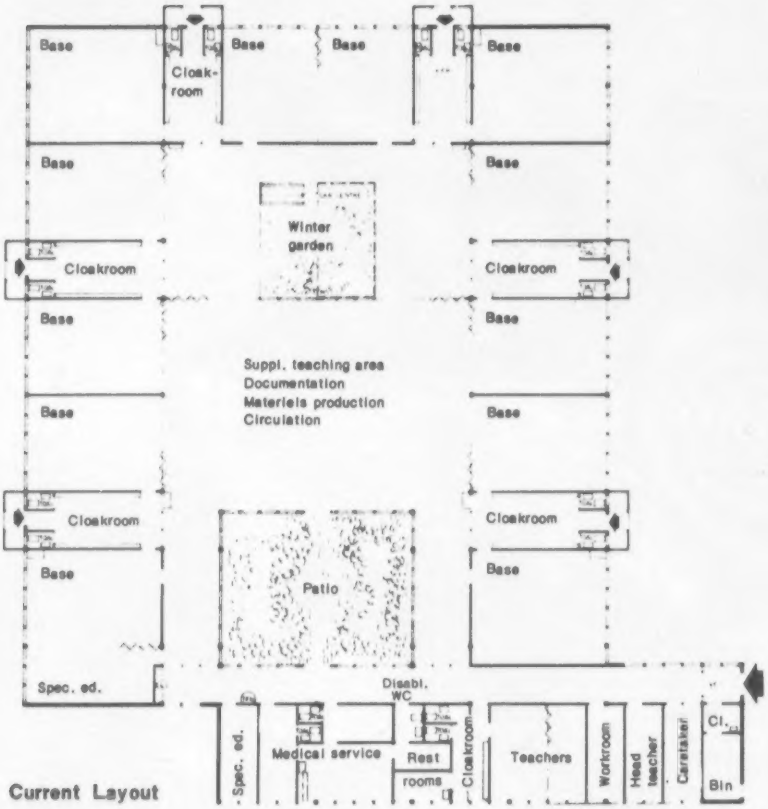


Figure 5 **MAIN SCHOOL**



Flexibility of design



Current Layout

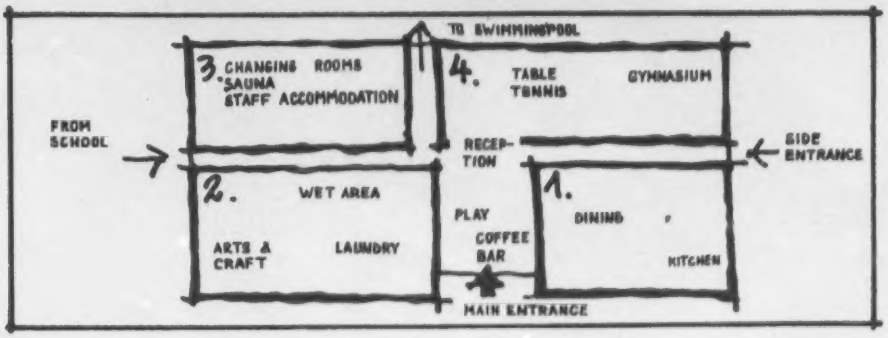
The two other main buildings, the Service Centre and the School, are designed as large flexible halls with a load-bearing column system which offers considerable possibilities in terms of layout. Present educational methods demand great flexibility and this is why the school has been fitted with light partitions and a system of folding walls. All pipework is fixed to the external walls.

The Service Centre is divided up into four rectangles by two main communication lanes along which the reception, coffee bar, play areas, cloakrooms, etc. are situated. The reception acts as the "brain" of the building. Here bookings are made for the laundry and the gymnasium, for renting the school dining room and adjacent club room; and residents can ask for goods to be delivered here if they are not at home.

The integration thus achieved between various types of activities enables the facilities to be used more effectively with consequent functional and economic advantages. To achieve this, a single management of the facilities is needed; in this case it is Väsbyhem who administers the use of all the facilities from the reception in the Service Centre.

The Ekebo project illustrates however that the benefits of co-ordination are not necessarily dependent on concentrating the facilities in a single complex. Certain facilities, such as the neighbourhood schools in this case, can well be dispersed thus improving the quality of the social environment.

Figure 6 **DIAGRAMMATIC PRESENTATION OF THE SERVICE CENTRE**



1. Dining room and assembly hall with kitchen and kitchenette which are used during the daytime by the school but can be rented out for parties or meetings. In the latter case, side entrance from the east is used.

2. Laundry and arts and craft department which can also be used in the evenings. The arts and craft rooms are provided with extra space for voluntary evening activities.

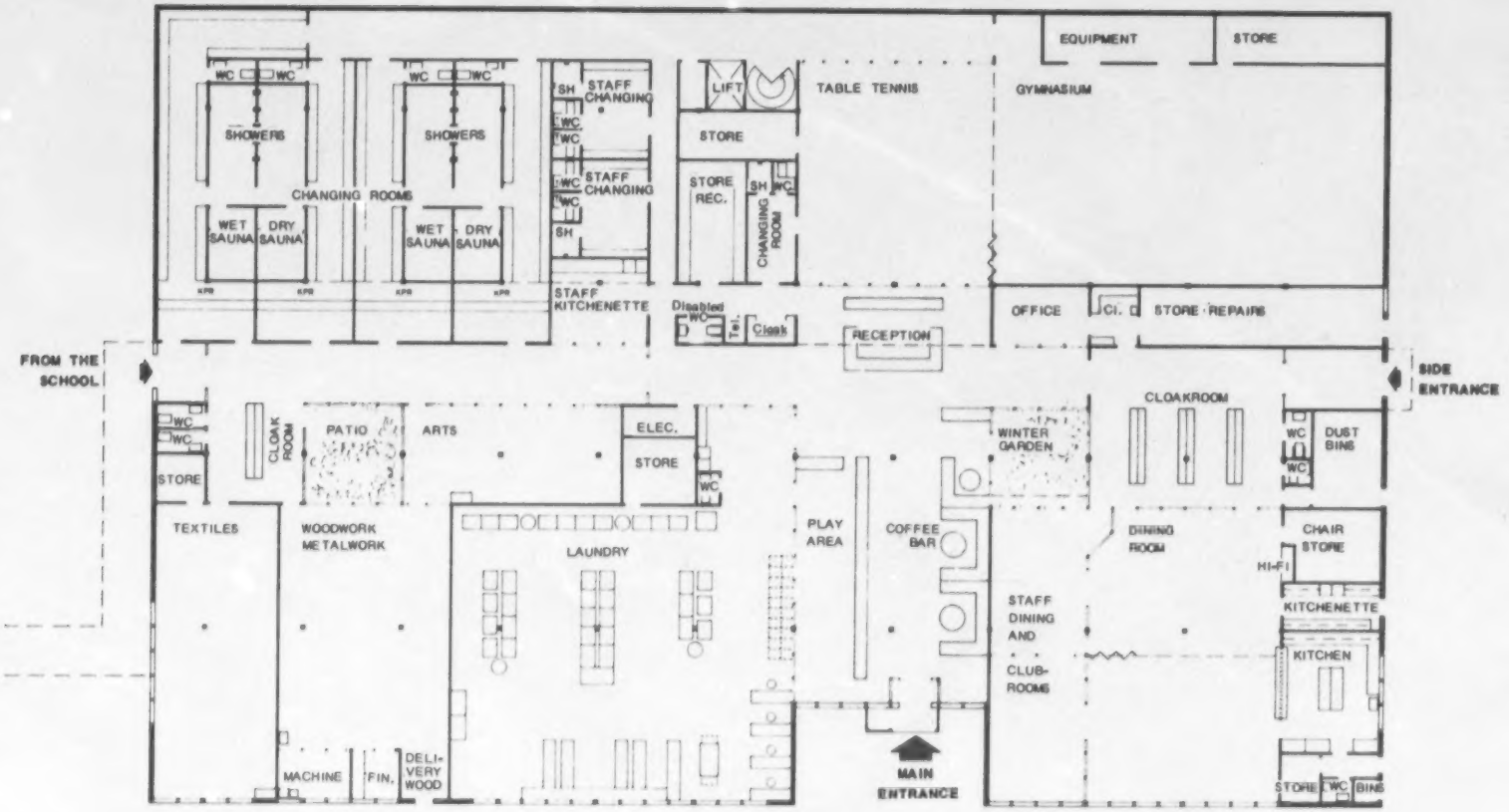
3. Changing rooms which are used not only for the physical training activities within the building but also for outdoor exercise on the ball pitch or the running track and for the swimming pool during the winter.

4. Physical training facilities for gymnastics, badminton and table tennis. These facilities can be combined to form a larger hall by pulling aside a folding wall.

The swimming pool lies immediately to the north of the Service Centre. This pool is used separately during the summer months; it can be covered by a tent roof during the winter when the changing rooms in the Service Centre are used.

Large areas for play and exercise are provided around the complex and in conjunction with the park. There is also a park playground with a play house, an adventure playground and areas for constructive games as well as sand-pits, climbing structures and swings for the smaller children. The ball pitch and sports areas belonging to the school are included in the total complex and are to be available to all.

Figure 7 **PLAN OF SERVICE CENTRE**



GRIMSTABY

Grimstaby lies in the centre of the Bollstanäs urban district in the eastern part of the municipality. This district originally contained scattered summer cottages, a few permanent dwellings in the form of detached houses and a number of large market gardens.

During the 1960s, the district expanded markedly with the addition of individual houses and terrace houses. In 1975, it contained some 1 500 dwellings. As the development of schools and services did not keep pace with this intensive expansion the central core of the district had to be developed to include these facilities. Since it comprised owner-occupied houses only, the municipality decided that the core should also contain small dwellings for letting. When Grimstaby is fully developed it will contain some 300 dwellings, facilities for all three levels of the "Grundskola" (with a total of about 35 classrooms), approximately 12 nursery school/crèche units, physical training facilities, a district library, a health centre, facilities for recreational and cultural activities and, of course, laundries and hobby rooms.

The main design principles in the Grimstaby project also differ from those of previous areas. The old Swedish small town with its neighbourhood blocks, lively streets and quiet courtyards has formed the basic model. Twelve neighbourhood blocks, ten of which contain each 25 to 30 dwellings and service facilities, are grouped along an east-west pedestrian mall. The buildings vary from one to two and a half storeys and the service facilities are generally located on the ground floor facing the mall. Small flats, with one or two rooms, kitchen and bath, lie above these facilities. Larger flats, consisting of three to five rooms, kitchen and bath are located at ground floor level.

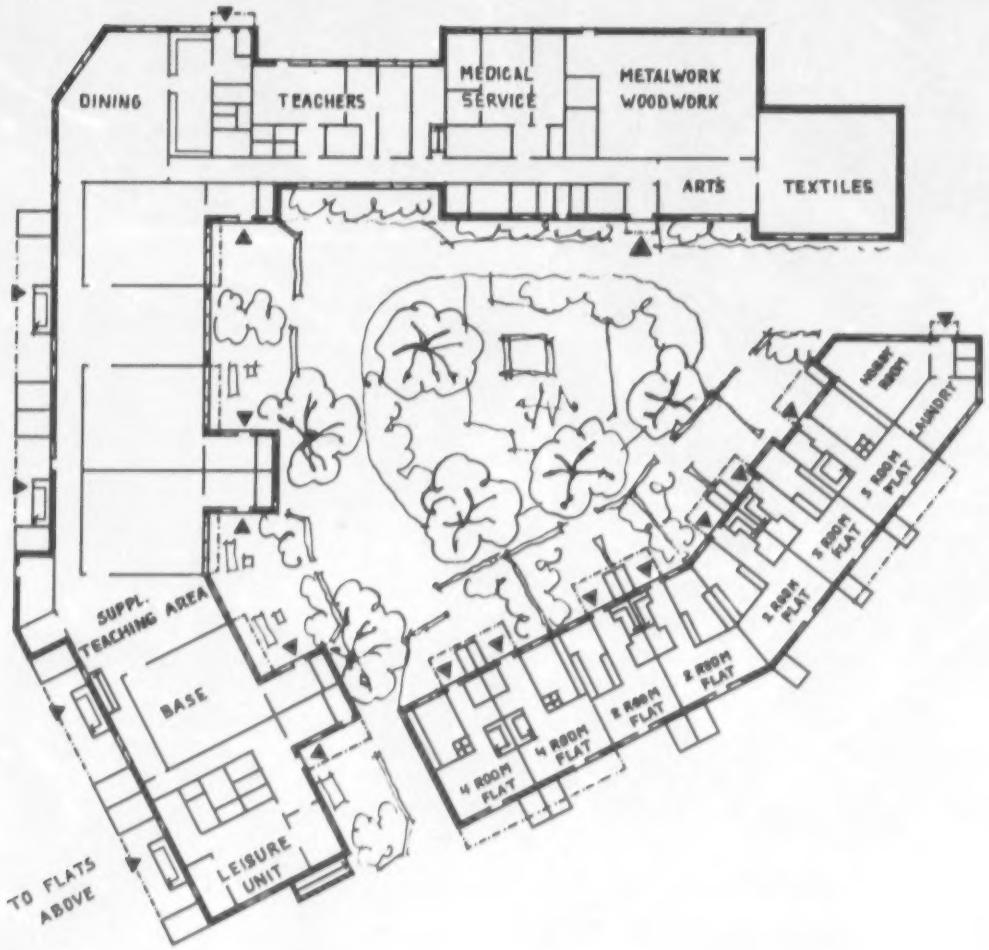
Integration, small scale and flexibility are the dominant features of the area. The conventional school units are even more dispersed than in Ekebo and each neighbourhood block has one or more school units which can later be converted for housing or other purposes. The relatively small blocks are designed to provide a framework for the social life of those who live there and each such block will, hopefully, contain families of varying backgrounds and composition. No two blocks are quite alike and the buildings are also highly individualised in design and colour.

Phase 1

During this phase three neighbourhood blocks were built in the western part of the area. These contain 58 dwellings as well as eight classrooms, three nursery school/crèche units, facilities for arts and craft, administration, physical training, and a workshop to be let to a craftsman. In addition, a laundry and a hobby room have been provided in each block.

Neighbourhood block 1 contains four classrooms with a dining room of their own and a small after-school leisure centre. Small flats are located over the classrooms. A second wing of this building comprises administration offices for the school and the arts and craft facilities which are available to residents in the evenings and at weekends and

Figure 8 **PLAN OF NEIGHBOURHOOD BLOCK 1**



holidays. The third wing is a separate building and consists of flats.

Neighbourhood block 2 also contains four classrooms with a dining room which can be used for meetings or parties by the residents. Physical training facilities are also located here and are used by the school during the daytime and by the residents during the evenings and at weekends. These facilities include a gymnasium, changing rooms and a sauna.

Neighbourhood block 3 consists mainly of dwellings but also contains a nursery school on the ground floor. In addition, space has been reserved for a workshop for crafts and skilled trades. This can be combined with the flat on the floor above if the tenant wants to live and work in the same place.

Phase 2

This phase concerns the eastern part of the area and consists mainly of providing facilities for the upper level of the "Grundskola" in three separate buildings. During the next eight to ten years 21 classrooms will be required for this level of education. Twelve of these will be located in a main building and 9 will be distributed in threes as neighbourhood schools among the dwelling blocks.

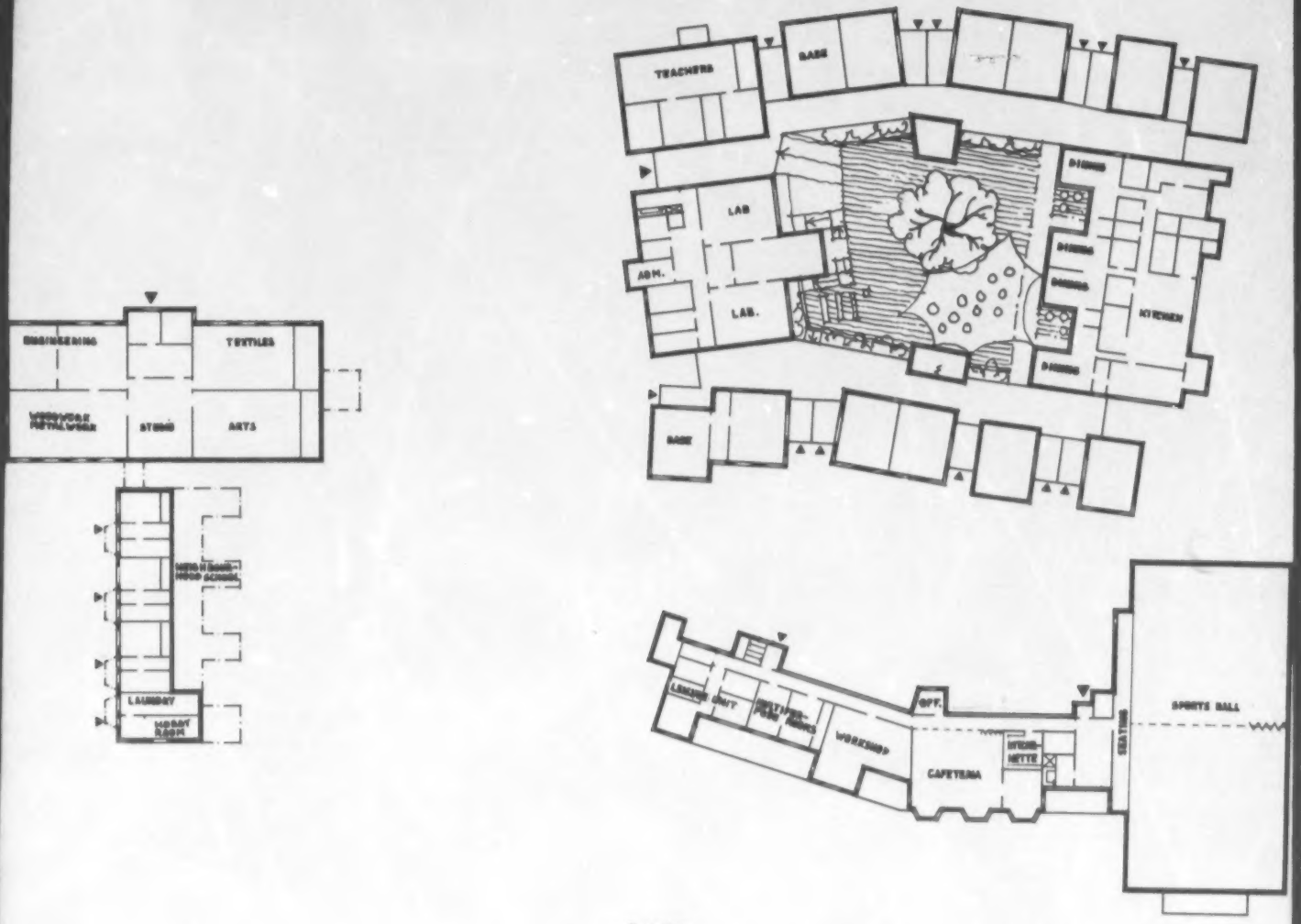
The main building is in the form of a village around an open courtyard similar to the other blocks in the area. In addition to the 12 classrooms, it contains administration offices, science laboratories, kitchens and four dining rooms.

The classrooms are grouped in twos in small "houses" designed in the style of the area. The western wing contains the main entrance, administration offices and laboratories on the ground floor and on the first floor a large attic which will be used by the school for large-group tuition, theatre activities or information purposes during the daytime. In the evenings it can be rented out to individuals or societies for parties or other gatherings.

The internal courtyard can be used for open air barbecue parties, community singing or recitals and dances as well as for teaching during school hours.

A second building the entrance of which is on the pedestrian mall contains those school facilities that residents in the area may be interested in renting during the evenings. These facilities comprise rooms for arts and craft, music and drawing as well as an engineering workshop. A neighbourhood school for three classes with a small dining room of its own adjoins this building.

Figure 9 **PLAN OF THE THREE BUILDINGS OF THE SECOND PHASE OF THE GRIMSTABY PROJECT**



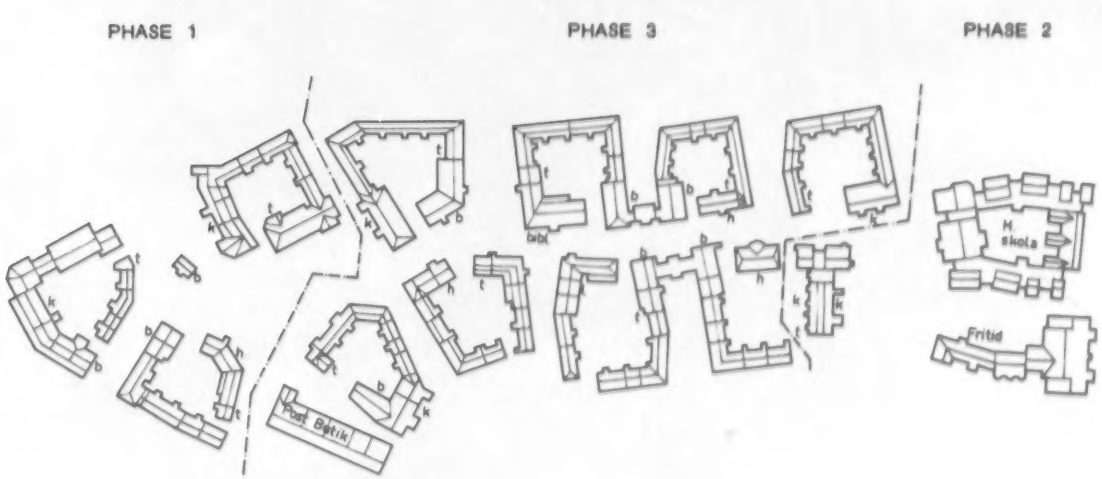
The third building contains other recreational facilities for joint use by the school and the residents. These facilities comprise a large sports hall (20 x 40 m.) with seating for spectators, a lobby, changing room and sauna, as well as a cafeteria and a workshop for hobby activities and a number of other rooms which can be used in various ways.

Phase 3

Construction work for this phase started in the winter of 1976-77. Eight neighbourhood blocks situated between those of Phase 1 and the school and leisure facilities of Phase 2, will provide about 200 dwellings as well as four neighbourhood schools, each with three classrooms and a dining room. These schools are designed to be converted into dwellings in the future.

A shop, a post office, a health centre, a district library, eight nursery schools/crèche units and a number of workshops for crafts and skilled trades also form part of this final phase.

Figure 10 **PLAN OF THE THREE PHASES OF THE GRIMSTABY PROJECT**



K = neighbourhood school
b = nursery school/ crèche unit
Post = post office
Butik = shop
L = health/ centre
bibl. = library
t = laundry and hobby room
h = workshops for crafts and skilled trades

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